

Comprehension of stories after dialogic reading with questions based on narrative thematic dimensions¹

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ABSTRACT - We investigated the effects of dialogic reading – reading aloud interspersed with questions and feedback based on narrative thematic dimensions (functions) – on the comprehension of brother Grimm’s tales. Twenty-two tales were read individually to three children (aged 8, 8 and 13 years), in a baseline condition (Straight reading) and intervention (Dialogic reading), using multiple baseline design across participants. Comprehension was assessed through percentage of story events and narrative functions verbalized during retelling tasks. Correspondence between tales and retelling was higher under the Dialogic Reading condition, especially for narrative functions. The role of questions, differential reinforcement and text are discussed.

Keywords: shared reading, verbal behavior, text comprehension, Behavior Analysis

Compreensão de contos após leitura dialógica com perguntas baseadas em dimensões temáticas da narrativa

RESUMO - Investigou-se o efeito da leitura dialógica – leitura em voz alta intercalada com perguntas e *feedback* baseados em dimensões temáticas (funções) da narrativa – sobre a compreensão de contos dos Irmãos Grimm. Vinte e dois contos foram lidos individualmente a três crianças, sendo duas com oito anos de idade e uma com treze, de forma simples (sem intervenções adicionais) e dialógica, em um delineamento de linha de base múltipla por participante. A compreensão foi avaliada por meio da porcentagem de eventos do enredo e funções da narrativa verbalizadas em tarefas de reconto. A correspondência entre as histórias e os recontos foi superior na condição Leitura Dialógica, especialmente para funções narrativas. Discute-se o papel das perguntas, do reforçamento diferencial e do texto nos efeitos encontrados.

Palavras-chave: leitura compartilhada, comportamento verbal, compreensão de textos, Análise do Comportamento

In the context of this study, shared reading can be defined as the reading aloud (followed or not by other kinds of interaction such as comments and questions addressed to the child/children) of a storybook by an adult (hereafter referred to as the storyteller) to one or more children. Several studies suggest a positive relation between shared reading of stories in childhood and language development (refer to Duursma, Augustyn & Zuckerman, 2010, for a review) including gains in vocabulary (Justice, Meier & Walpole, 2005) and verbal construction of narratives (Lever & Sénéchal, 2011). There are also some indications that reading stories to children favors taste and motivation for reading (Baker, Mackler, Sonneschein & Serpell, 2001). However, there is little data about the effects of shared reading on story comprehension (exceptions are Fontes and Cardoso-Martins, 2004 and Flores, Pires and Souza, 2014, described below). In most studies about shared reading the focus is on possible effects of this activity on the development of receptive and expressive vocabulary, usually in children of pre-school age (e.g. Barnes, Dickinson & Grifenhagen, 2016; Gonzalez *et al.*, 2014).

There are many ways of sharing a book reading that vary according to the specific actions performed by the storyteller, before, during and after the read-aloud (Kindle, 2011; Reese & Cox, 1999). Reese and Cox (1999), for example, have compared the benefits of three styles of shared reading on the development of linguistic skills: The *describer* style (where the storyteller leads the child to name and describe the figures during reading); the *comprehender* style (storyteller focuses on the meaning of the story and requires inferences and predictions during reading) and the *performance-oriented* style (non-stop reading of the story with debates before and after reading). The gains resulting from each reading style varied according to the child’s initial skills. The youngest ones, or those with less linguistic skills, were mainly benefited with the descriptive style, while older or more skilled children benefited more from the performance-oriented style.

Studies such as those by Reese and Cox (1999) suggest that specific actions performed by the storytellers have direct influence on the skills targeted by shared reading. The use of interactive strategies, i.e., strategies that encourage children to engage in talks that go beyond the information contained in the book, seem to be particularly beneficial the expansion of expressive vocabulary and text comprehension (Brabham & Lynch-Brown, 2002; Vally, 2012).

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Recently, Zauche, Thul, Mahoney & Stapel-Wax (2016) revised the empirical literature from 1990 to 2014 approaching different types of linguistic interactions in early childhood, and their effects on cognitive development. Among the findings of the review, a kind of shared reading known as dialogic reading was highlighted by the authors. It was considered to be one of forms of interaction between children and parents more favorable to linguistic development, notably expressive vocabulary. The principles of dialogic reading can be described as: (a) use of evocative strategies such as wh- questions (why, when, who, where, etc.) and ask the child to make connections between aspects of the story and his/her experience; (b) provide feedback contingent on the child's verbalization (praises, repetitions, models of response and expansion of the child's responses); and, (c) gradual increase of the complexity of questions as the child's repertoire expands (Camelo & Souza, 2009; Whitehurst et al., 1988).

In Brazil, Fontes and Cardoso-Martins (2004) investigated the effects of dialogic reading (they named it *interactive*, but the intervention was very similar to the one described in the paragraph above). The participants were 38 preschool children from low-income families. The authors investigated their comprehension of the story, their expressive vocabulary and writing skills. Children in the experimental group participated in 16 dialogic reading sessions at their day care centers, while those in the control group maintained their everyday routine without this activity. Pre and post-test comparisons showed significant gains for the experimental group against the control group as regards comprehension of the story and expressive vocabulary. However, no gain for writing skills was found. The study provided no evidence about the specific effects of dialogic interventions on comprehension, because there was no comparison with a control condition where reading was performed in a non-dialogic way.

Flores, Pires and Souza (2014) tried to bridge this gap with an experiment about the effects of dialogic reading on the comprehension of texts in three children enrolled in the 3rd year of elementary school. In the experiment, the authors used a single-subject reversal design. The procedure consisted of individual sessions in which an adult read one chapter of a children's novel per encounter. Reading was simple (without the interventions typical of dialogic reading, Condition A) or dialogic (Condition B). An inverted reversal design (B-A-B) was used with two participants, and a traditional one (A-B-A) with the third participant. Comprehension of each chapter was evaluated through free recall (i.e., the child was given general instructions to retell the chapter he/she had just heard) and recall guided by questions based on narrative structure³.

Comprehension as evidenced by recall tasks was measured by (a) percentage of story events mentioned by the child (for example, the first event in many versions of the *Little Red Riding Hood* is a dialogue where the mother asks the daughter to take a basket food to her grandma's house); and, (b) percentage of narrative functions verbalized. Narrative functions were measured based on the notion of "text

functional unit" proposed by Roland Barthes (1966/2009). This definition stems from its sense or relationship with other parts or levels of the text, rather than from formal aspects such as paragraphs or phrases. One function can even be spread over different parts of the text, many times in an implicit or indirect way. An example of the narrative function on the aforementioned tale is the naivety of the Little Red Riding Hood. This function may be not explicit on a specific part of the tale. However, it implicitly permeates the whole text. It explains, for example, why did Little Red Riding Hood disobey her mother's order ("don't stop on the way and don't talk to strangers!") and why she was deceived so many times by the big bad wolf. A function of narrative can be conceptualized as a narrative dimension that readers must comprehend to understand the narrative as a whole. When the reader's verbal behavior is under the control of these functions, we have empirical evidence that he/she comprehended the narrative. In the example above, if the reader says that Little Red Riding Hood is a "smart" character, we would surely say he/she did not understand the story. However, this would be accepted as evidence of the relationship between the child's behavior control and the narrative function of verbal responses such as "she is a fool" or "she thought the big bad wolf was her grandma". The correspondence between the narrative and the child's performance when retelling it is evaluated in a functional rather than topographic way. This last would be closer to what is typically known as "memorize" the text. Therefore, in addition to the events of the story, the evaluation of comprehension should also comprise the narrative functions. Traits of characters, scenario description, emotional state of characters and their relations with the narrative events, causal relationships between two or more events in the story are some examples of the narrative functions as conceptualized by Flores, Pires & Souza (2014). In their analysis, the narrative functions served the double purpose of preparing the questions for the dialogic reading, and ground the evaluation of the child's comprehension.

In the study by Flores, Pires & Souza (2014) for P1 and P2 participants exposed to the B-A-B order, the percentage of verbalized events and functions was higher in Dialogic Reading when compared with Simple Reading. This corroborates the literature in this field. For participant P3, subjected to the A-B-A order, there was no systematic difference between conditions. The authors argue that starting sessions with simple reading could have damaged the comprehension of the initial parts of the novel. This jeopardizes understanding the other functions in the remainder book, since chapters are interdependent. To solve this methodological issue, the authors suggested replicating the procedure using different narratives in each condition.

This paper investigated the study of dialogic reading on the comprehension of Grimm's tales, to contribute with the scarce literature about the effects of dialogic reading on the comprehension of narratives. In continuation to the investigation by Flores, Pires and Souza (2014), we tried to answer the issue of interdependence of chapters, as an explanation for the different performances of participants. For that, we used independent texts (the Grimm Brothers' fairytales every session). Following Flores, Pires and Souza (2014),

3 This article used the word *retell* to name the phase when the child recounted the history, based on the Portuguese expression "*reconto*" found at *Glossário CEALE de Termos de Alfabetização, Letramento e Escrita para Educadores* (<http://ceale.fae.ufmg.br/app/webroot/glossarioceale/>).

this study used integral and non-adapted literary texts to increase the ecological validity. An important aspect of reading “ecology” is the text itself, i.e., the ecological validity of the study on comprehension using an adapted and simplified for experimental purposes is different from that of texts without these adaptations.

Method

Participants

Three students of the Elementary Education in a public school of Brasilia/DF have participated. Two were 3rd year girls, Rita and Lola, both of eight years old, and a 5th year boy, Lucas⁴, aged 13. All the participants were referred by their teachers. The researchers suggested that mainly students with difficulty to comprehend texts (observed by teachers in the school life) should be referred. Two criteria were followed: To be regular students, and that the book should be adequate to their level of comprehension (neither too easy, nor too difficult to avoid floor or ceiling effects). The last criterion was verified through two pilot sessions also intended to get children acquainted with the procedure, and to facilitate the rapport with the storyteller and the researcher that would interact with them during the retell tasks.

Site

Data collection was performed at the public school where children studied in a room of about 15m², furnished with a table with chairs, natural (widows) and artificial (fan) ventilation, in addition to natural (windows) and artificial (lamps on the roof) lighting.

Materials

The book *Contos Maravilhosos Infantis e Domésticos*⁵ (1812-1815) by Jacob and Wilhelm Grimm (Publisher: Cosac Naify) was used for the sessions of shared reading. The 2-volume book is a collection of 156 wonderful tales⁶ resulting from the documentation of oral tradition tales performed by the Grimm Brothers in the 19th century. Sessions were recorded on a digital camera on a tripod.

Twenty-two stories of similar size were selected, measured based on the number of events in each tale. “Events” could be described as the actions and events in the narrative, located in the narrative time and space, and that make up its

storyline⁷. The selection excluded universally known tales such as: *Cinderella*; *Hansel and Gretel*; *Little Red Riding Hood*; *Puss in Boots*; *Rapunzel*, etc. The participants were also asked to tell the researchers if they already knew any of the stories and they were frequently recalled to do so. No participant reported to be familiar with any of the histories. We have also avoided tales with similar storylines, which is a common fact in some Grimm Brothers’ tales.

Analysis of tales, preparation of questions and protocols

Two researchers have previously analyzed the 22 tales, in an independent way. This resulted in lists of the events and narrative functions of each tale. The matches between the researchers’ analyses were kept, while mismatches were redesigned. On average, the tales were constituted by 8.23 functions ($\sigma = 2.16$) and 21 events ($\sigma = 4.8$).

The analysis of the narrative functions has also grounded the elaboration of the questions to be asked during Dialogic Reading sessions. These were open-ended questions related with the history. They were scheduled to evoke the children’s verbalization about the functions of the previously analyze narrative. Still in the example of Little Red Riding Hood, a likely question to evoke the child’s verbalizations about the character’s naivety could be, soon after the character meets the disguised wolf in her grandma’s bed: “Why is Little Red Riding Hood asking so many questions” or “So-and-so, how would you react if you met the wolf dressed like the grandma?” The lists of functions and events also served to build protocols of analyses of the records. This assisted computing the functions and events verbalized by children during retells (see “Measurements” below).

Selection and training of the storyteller

The survey was supported by a storyteller selected among three candidates. Through role-playing, we discussed with them the techniques employed in dialogic reading, emphasizing the importance of open-ended questions to evoke children’s verbalizations about the narrative and the differential reinforcer contingent to these verbalizations.

Figure 1 summarizes the dialogic interactions between the storyteller and the child, as emphasized in the training. During dialogic readings, the storyteller should interrupt the reading at pre-defined moments of the history, and emit the previously programmed question. If the question was not enough to evoke the child’s verbalization about the narrative function, the storyteller should reformulate the questions with a different wording. If the child still could not verbalize about the function, the storyteller should increase the cues and resume the narrative events. If, however, the child still did not

4 In respect to the participants’ privacy, all names herein are fictitious.

5 Children’s and Household Tales.

6 Also known as “fairytales” or “magic tales”, the wonderful tales are characterized for being short narratives, where the storyline is developed from an initial motivation. They typically involve magic or charming elements. Consul Propp (1928/2001) for a proposal on the classification and morphological analysis of wonderful tales.

7 Trabasso and Sperry (1985) emphasize that events in a narrative are usually organized in causal chains, keeping a logical relationship with each other. If in a history (1) the Princess kisses the frog, (2) the frog becomes a Prince and (3) they marry each other, there are three events in this excerpt, where the first is a condition required to the second, the second to the third, and so on.

verbalize the function, the storyteller would offer a response pattern and move on the reading. If after any intervention the child verbalized about the function, the storyteller was instructed to differentially reinforce the child's verbalization through praises, and continue the dialogue with other questions and comments.

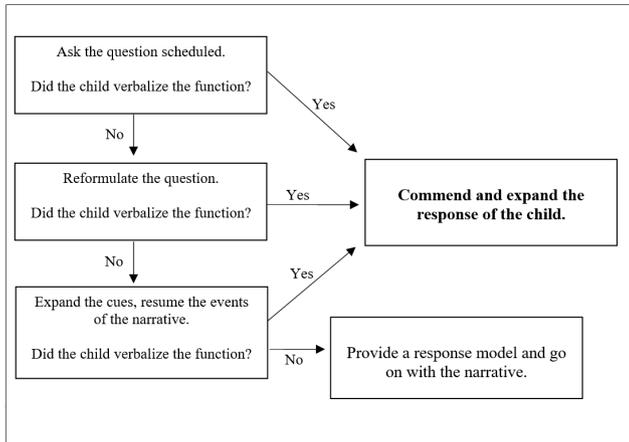


Figure 1. Diagram of the dialogic interactions between storyteller and child

Procedures

Before each session, the storyteller picked the child at the classroom and took him/her to the reading site. Arriving there, they sat down at the table, the camera on the tripod was turned on, the storyteller told the name of the story she would read that day and started reading. The storyteller sat besides the child with the book open, so that the child could follow the reading if she wanted. Tales were read in a simple or dialogic way, depending on the experimental condition in force.

A multiple baseline outlining was used to each participant. It was characterized by the intervention at different moments to each participant (Iversen, 2013). First, tales were read in the simple form and, in the following condition, in a dialogic way. This first baseline was a requirement to the second. Rita started the Dialogic Reading condition on Session 8; Lola on Session 11; and Lucas on Session 14. In each session a tale was read and all the 22 tales were read in the same order for all participants, regardless the experimental condition. Therefore, some tales were read only in the simple form (1 to 8), others were read in the simple form to some participants and dialogically to others (8 to 14) and others were read only in the dialogic form (14 to 22).

On the baseline (Simple Reading condition), the storyteller was instructed to read the history in the simple way, with no dialogic intervention. In this condition, dialogue would happen during the reading mediation only when spontaneously started by the child (what never happened in this condition). The storyteller was instructed to keep all the prosody elements (rhythm, theatricality, intonation, loudness, different voices to each character, etc) typically used in her reading mediations.

During the intervention phase (Dialogic Reading condition), the storyteller was instructed to read the story making

interruptions and asking pre-scheduled open-ended questions, as emphasized in her training (please see Figure 1).

Soon after the reading in baseline and intervention, the storyteller left the place and another researcher came in. Then, this researcher asked the child to tell the history of that day, showing curiosity with phrases like "So, which story you were told today? Could you tell me it?" When the child said she could not remember it, the researcher insisted for him/her to tell what they recalled. When the child said to have told all she could remember, the researcher asked: "Would you like to tell me anything else?" If the response was negative, the researcher moved on to the directed retell.

In the directed retell, the researcher asked open-ended questions, previously planned, about the narrative functions (one question to each function). The questions asked in this stage were different from those asked to the children during reading. In this stage, there was no feedback to the child's response.

Measurements

The comprehension of the story read to the child was evaluated based on the percentage of events and functions of the narrative verbalized by the child during the retell, in line with Flores, Pires and Souza (2014). Records were analyzed and the correspondence between the child's verbalizations and the events and function of the narrative were computed. The functions or events were recorded as verbalized by the child when a relationship of thematic control (Skinner, 1957) between the child and any event or function of the narrative could be inferred, rather than by the specific topography of the verbal response.

Analysis of agreement of judgments

When the retells analysis was concluded, the agreement between the verbalized events and functions recorded by a researcher and those recorded by an undergraduate student were calculated. They recorded twelve retells (two tales drawn for each condition, one to each child = 2 x 2 x 3), regardless of and not knowing the experimental condition involved. The student was familiar with the measurements of narrative events and functions because she had already participated in another survey of the group.

Agreement was considered when both coincided in their evaluation about one event or function as having been verbalized or not by the child. The agreement, calculated as total agreements/(agreements + disagreements) times 100 was 94% for narrative functions and 90% for narrative events.

Intervention fidelity

When collection was concluded, the records of eight dialogic reading mediations were randomly selected and analyzed to check if the storyteller had attached to planning during the intervention phase. It checked if the questions planned by researchers were effectively emitted by the

storyteller during reading. Of the eight reading mediations analyzed (three with Rita, three with Lola and two with Lucas), the storyteller emitted 100% of the planned questions. Another finding was that no question was asked in the condition of simple shared reading.

Ethical considerations

The research project was approved by the Committee of Ethics in Research, and followed the provisions of Resolution 466/12 issued by the Brazilian National Health Council. It tried to respect the principle of *informed consent* of the participating children (Harcourt & Conroy, 2005) explaining them how the procedure would be and the free and voluntary nature of participation. Before deciding to participate in the research, they were presented to a demonstrative session where they could experience the procedure and clarify their doubts. With this, they did not depend exclusively on the abstract explanation (non dialogic, like in the baseline, was used and a tale that should not be told in the research sessions). Their parents/tutors signed the Free and Informed Consent Term and the Term of Permission to Record Images after the reading.

Results

The data below refer to the percentage of events and functions of the narrative verbalized by the participants Rita, Lola and Lucas in the free and directed retells, during the conditions of Simple Reading (baseline) and Dialogic Reading (intervention). The reading mediations with Rita were interrupted in the 19th session because of the end of the academic semester. Moreover, the number of sessions with her seemed to be enough, considering that she participated in 12 sessions of dialogic reading. This number is equal to or higher than that of the remainder participants. Due to a technical failure the data for the participant Lola's Session 1 could not be recorded.

Data are presented in temporal series that allow observing the percentages of events and functions verbalized in each session. The temporal series present linear lines of tendency, depicting the best adjustment of the data set and tendencies in each experimental condition.

Events

Figure 2 shows the percentage of events cited, by session, by the participants Rita, Lola and Lucas, based on the events verbalized during the free retell, added with additional events verbalized in the directed retell task⁸.

For the Simple Reading condition, the percentages of events cited by the participant Rita ranged from zero to 20%, except for Session 3 (58%) and Session 5 (74%). When

8 We decided to present the events verbalized in free and directed retells in an aggregated way after observing that children hardly mentioned events during directed retell. In the directed retell questions were asked specifically about the narrative functions and, as required by the task, children seldom mentioned events in this stage.

changing to the Dialogic Reading, the average increases, but with variation of data per session, which ended in a descending trend. Except for Session 14, where Rita did not refer to any event, the percentage of events verbalized in the condition of Dialogic Reading ranged between 22% and 74%. In seven of 12 sessions (8, 9, 11, 13, 16, 17, 18) percentages are above 40%.

The percentages of events cited by Lola in the Simple Reading condition presented three peaks in Sessions 3, 5 and 8, where the participant cited 63%, 53% and 65% of the events of narratives, respectively. The remainder sessions ranged between 5% and 40%. When changed to the Dialogic Reading condition, the percentage of events cited by Lola ranged from 45% to 80% from Session 12 onwards. In Session 11, the participant cited only 5% of the events. In the condition of Simple Reading, Lucas has not cited any event in Sessions 1 and 12, while the remainder sessions ranged between 7% and 47%. In the condition of Dialogic Reading, the percentage of events cited by Lucas ranged between 10% and 48%, with decreasing tendency.

Functions of the narrative

Figure 3 presents the percentage of narrative functions verbalized by the participants Rita, Lola and Lucas in the free retell, by session, under the conditions Simple Reading and Dialogic Reading.

In the Simple Reading condition, Rita's performance ranged from zero to 17%, except for Session 5 where she verbalized 57% of the functions. In four of the seven sessions in the Simple Reading (1, 2, 4 and 7) condition Rita cited no narrative function. In the Dialogic Reading condition, performance was always above zero. In seven sessions (8, 9, 11, 15, 16, 17 and 19) the number of verbalized functions exceeded to 30%. Percentages tended to be higher in the Dialogic Reading condition, and there is an increasing trend, mainly in the last four sessions.

Lola verbalized 50% of the narrative functions in the free retell of the first session under the Simple Reading condition. However, in the remainder sessions she did not verbalize more than 30% of the tales functions. (In Sessions 4 and 10 she did not verbalize any function.) Moreover, her performance in the last four sessions presents decreasing tendency. In the Dialogic Reading condition, in turn, the number of verbalized functions ranged between 11% and 63%. In eight of the 11 sessions (12, 14, 15, 16, 19, 20, 21, 22) the performance was higher than 40%, with increasing tendency throughout the sessions.

In the first three sessions of the Simple Reading condition, Lucas did not verbalize any narrative function in his free retells of the tales read. In the following sessions (Sessions 3 to 14) the number of narrative functions verbalized ranged between 9% and 22%, except for Session 5 (57%) and Session 8 (43%). When he started the Dialogic Reading condition, there was a drastic increase in the percentage of verbalized functions, which ranged from 33% to 57% throughout the six following sessions, except for Session 18 (13%). However, from Session 20 onwards there was a sharp decrease of verbalized functions to zero or near zero.

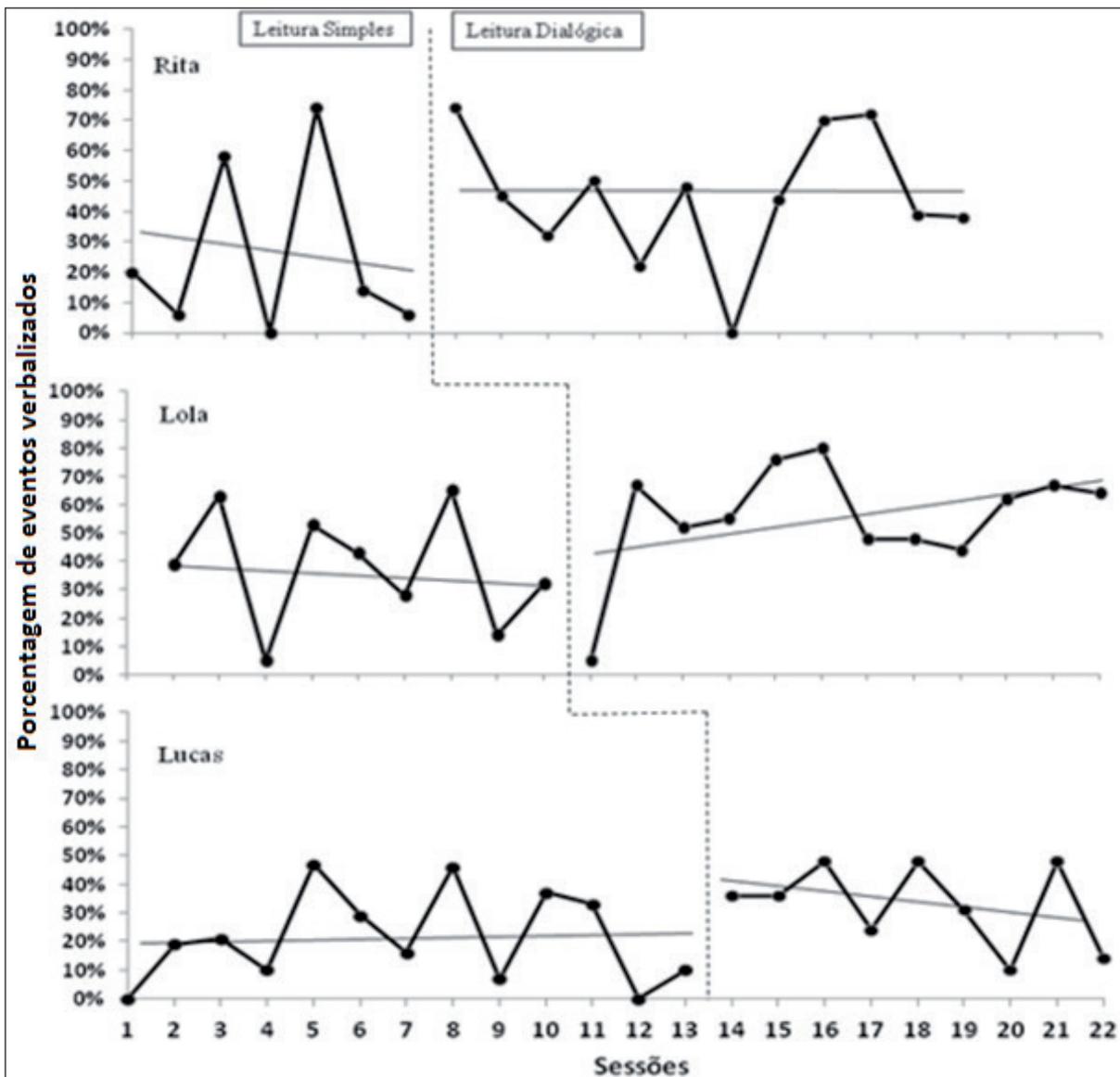


Figure 2. Events verbalized in the free and directed retell by the participants Rita, Lola and Lucas by session, in the conditions of Simple Reading and Dialogic Reading, with lines of tendency (continuous horizontal lines) for each condition.

Figure 4 shows the percentage of events mentioned, by session, by the participants Rita, Lola and Lucas, based on the function verbalized during the free retell, added with additional functions verbalized in the directed retell task. Just like in the directed retell condition, the questions asked usually led children to verbalize functions that had not been verbalized in the free retell. Figure 4 shows the total percentage of the narrative functions verbalized, including those verbalized in the free retell, plus the additional functions evoked by questions in the directed retell.

In the Simple Reading condition the participant Rita has not verbalized any function in four sessions (1, 2, 4 and 7) and verbalized only 9% of the functions in Session 6. Data present two peaks in Sessions 3 and 5, where Rita verbalized 67% and 57% of the functions, respectively. When she started the Dialogic Reading condition, there was a drastic increase in the percentage of verbalized functions. In the first dialogic reading session, Rita verbalized 83%

of the functions. The remainder sessions tended to remain between 50% and 100%.

In the Simple Reading condition, Lola's performance ranged from 17% to 50%, except for Session 3 (67%) and Session 8 (100). When the experimental condition was changed to this participant, there was a drastic increase from the 2nd dialogic reading session onwards, where percentage ranged from 64% to 100%, stabilizing in 100% in the last four sessions.

In the first three sessions of the Simple Reading condition, Lucas did not verbalize any narrative function in his free retells of the tales read. In the following sessions the number of narrative functions verbalized ranged between 7% and 44%, except for Session 5 (71%) and Session 8 (100%). Still in the first session of the Dialogic Reading condition, Lucas verbalized 71% of the functions. The remainder sessions ranged between 30% and 100%. In six sessions (14, 16, 17, 18, 19 e 22) the percentage of verbalized functions exceeded to 50%.

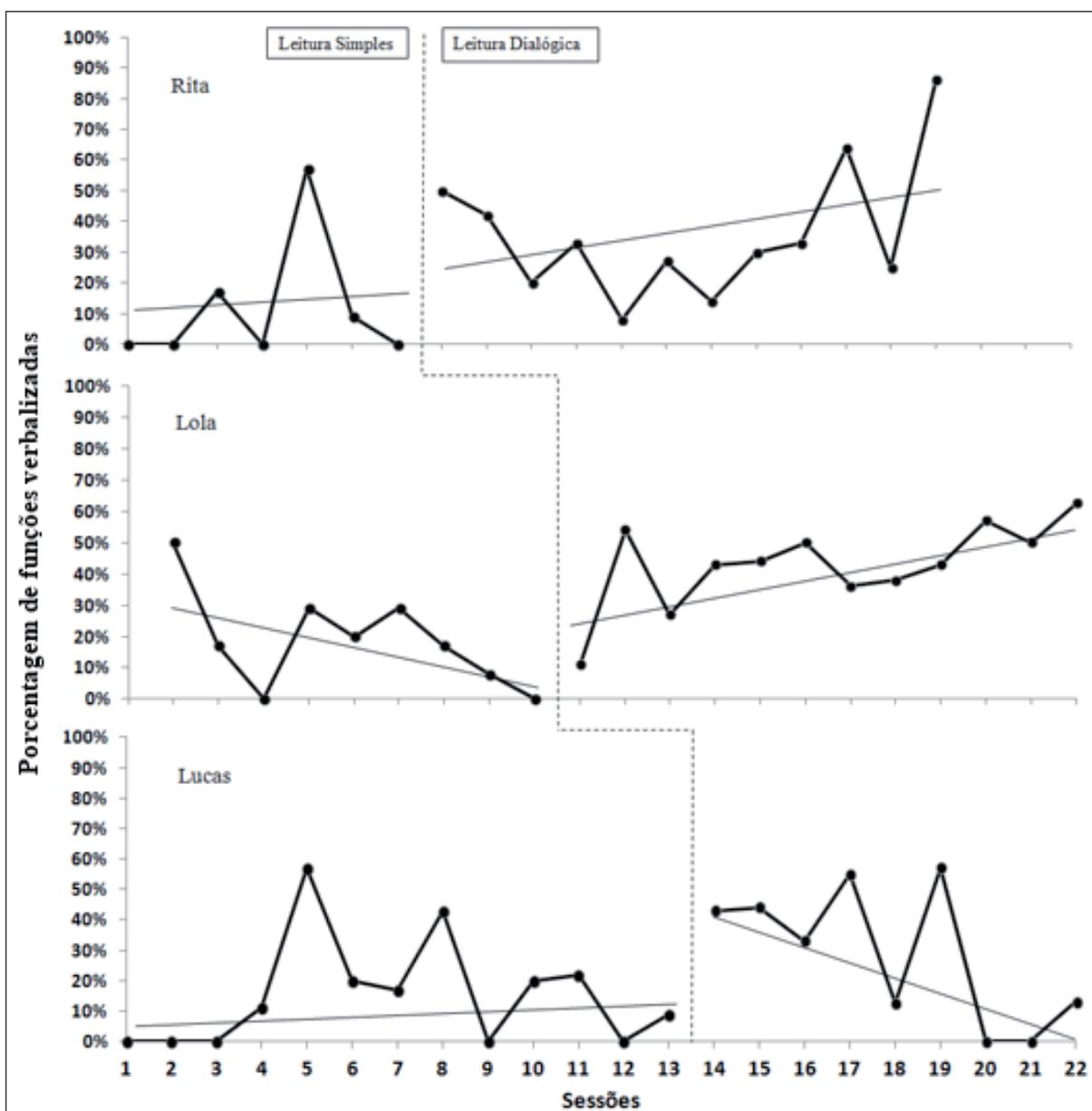


Figure 3. Functions verbalized in the free retell by the participants Rita, Lola and Lucas by session, in the conditions of Simple Reading and Dialogic Reading, with lines of tendency (continuous horizontal lines) for each condition.

Discussion

Generally speaking the Dialogic Reading condition favored the comprehension of tales read, as it produced higher percentages of events and functions verbalized by participants in the tasks of free and directed retell. However, the effect was more significant to the verbalizations about the narrative function than about events, in line with the study by Flores, Pires and Souza (2014).

Data also point out that directed retell has significantly contributed to the percentage of verbalized functions, when compared only with free retell (Figures 3 and 4). According to literature, the directed retell uses to be a better measurement for comprehension than the free retell. That is so because asking specific questions about the history can unveil aspects that the child has understood but do not appear spontaneously in the free retell (Goldman, Varma, Sharp &

the Cognition and Technology Group at Vanderbilt, 1999). The better performance of participants in the directed retell corroborates other surveys that used free and directed retells to evaluate children's performance after reading texts (e.g. Gazella & Stockman, 2003; Mira & Schwanenflugel, 2013). Data suggest that questions asked in the directed retell were more efficient occasions for verbalizations related to the narrative functions than the general instruction to retell the tale used in the free retell.

The different performances for free and directed retells could be attributed to the intervention program and different requirements between retells. The dialogic reading, as operated herein, shaped on children's behavior specific verbalizations about the narrative functions. The storyteller asked specific questions about the narrative functions and reinforced the verbal responses of the children under the

control of these functions in different ways. In the free retell, being capable of verbalizing about the narrative functions was not enough to coherently reconstruct the story. It demanded other repertoires that were not specifically modeled, like the behavior of “telling the history” (starting with “Once upon a time”, describe the setting, use of connectors, etc.). In the directed retell, in turn, only specific verbalizations about the narrative functions were required. For being a task that was less demanding and closer to what had been trained in the intervention, the directed retell is likely to have favored the participants’ performance. Moreover, the drop in Lucas’ performance in the free retell (Figure 3) in the last sessions of dialogic reading might be attributed to a potential discrimination by the participant about the differences between the retells. He may have learned to wait until the end of the free retell for the researcher to start the directed questions, what would facilitate retelling it. In this sense, the poorer performance of Lucas in the last free retell sessions does not necessarily indicate a decrease in comprehension, considering that the participant continues to reach high percentages in the same sessions during the

directed retell (Figure 4). It is also worth emphasizing that, although having facilitated the participants’ performance, the percentages of directed retell also tended to be higher under the Dialogic Reading condition than under the Simple Reading condition.

The differences between the experimental conditions to the measurement of narrative functions, mainly when the verbalized functions in directed retell are included, replicate the effects found for participants P1 and P2 in the survey by Flores, Pires and Souza (2014). The authors hypothesize that the lack of effect to participant P3 was mainly due to the order of experimental conditions to which he was submitted: A-B-A (simple reading - dialogic reading - simple reading). The authors believe that starting the novel with simple reading may have damaged the participant’s comprehension in the beginning of the story, influencing on the comprehension of the remainder book. By using literary tales independent one from the other instead of a novel, this study suggests the interdependence of chapters as one of the factors likely to have affected participant P3’s performance in the previous study.

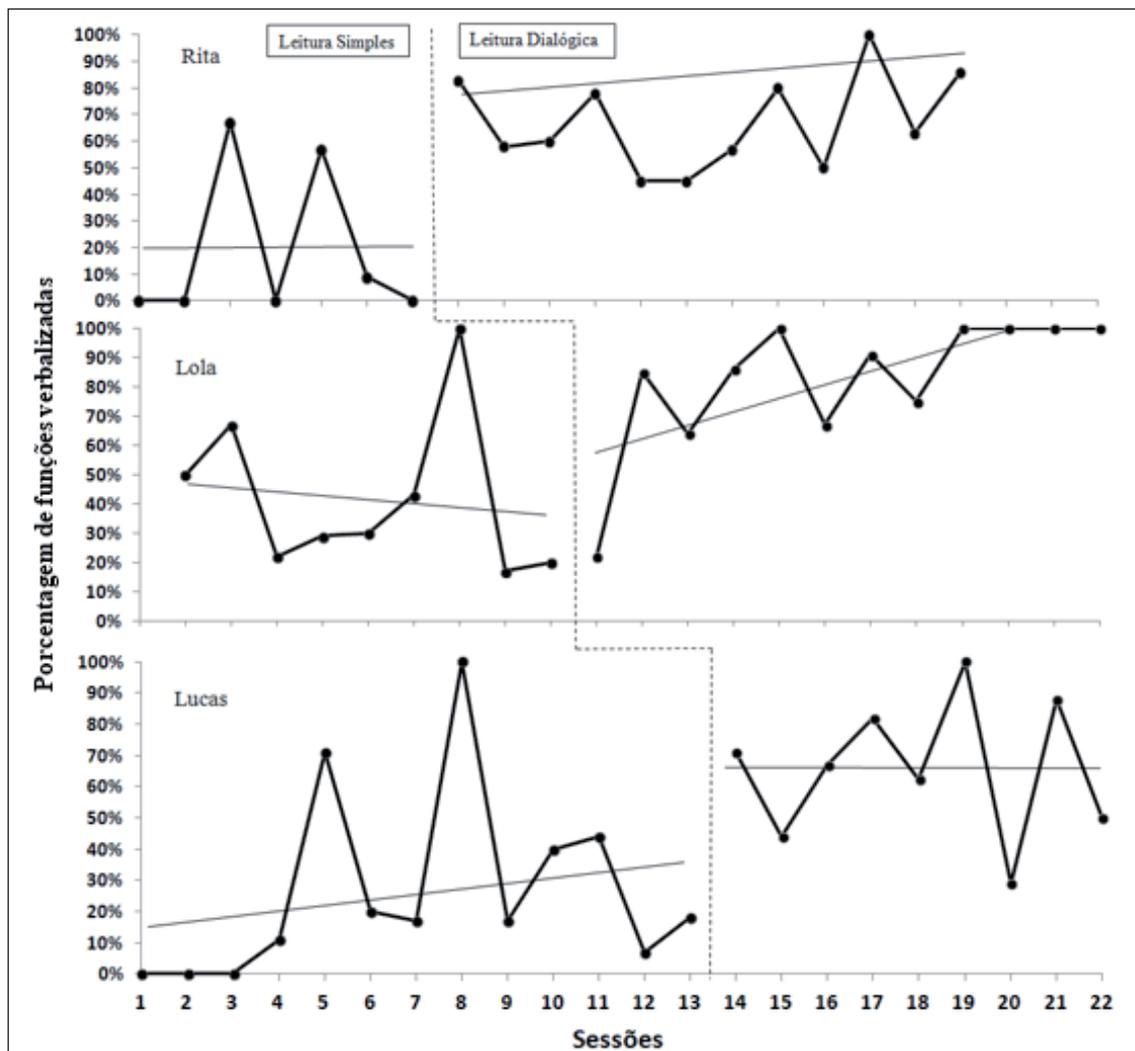


Figure 4. Functions verbalized in the free and directed retell by the participants Rita, Lola and Lucas by session, in the conditions of Simple Reading and Dialogic Reading, with lines of tendency (continuous horizontal lines) to each condition.

An analysis of the performance of participants in this survey seems to suggest that some sessions tended to favor the achievement of functions independently from the experimental condition. In Session 8, for example, all participants presented high percentages of verbalized events and functions, even Lola and Lucas to whom the tale was read in the simple form. Session 8 was the only session under the Simple Reading condition where Lola and Lucas verbalized 100% of the narrative functions. Sessions 3 and 5 also tended to present higher percentage of events and functions verbalized by participants.

Despite the careful selection of tales (selecting tales written by the same authors, of similar sizes, same genre, excluding “universally known” tales and asking children to report if they already knew any of the tales), some tales (e.g., Sessions 3, 5 and 8) seemed to be “easier” to understand. This may have influenced the results of this survey. Pearson (2009) states that reading comprehension happens in the intersection of three variables: Context in which the story is read, the reader and the text. If a reader is familiar with some text, i.e., if he/she read or heard the story in the past, they tend to comprehend it better (i.e., variable of reader or of learning history involving similar texts). Other texts can be easier to be understood because of their own features, for having simpler vocabulary or structure, for example (i.e.: Text variable). Although the use of non-adapted children-youth texts contributes to the ecological validity of the study, it may have hindered the control over the variables of the text and of the previous experience of participants.

Likely differences between texts or the participants’ previous knowledge may have influenced the performance in some sessions, but do not invalidate the statement that Dialogic Reading favored this study participants’ comprehension of the text. That is so because the design employed allows the observation of a systematic difference between conditions at different moments to each participant (please see Figure 4). One could argue, for example, that tales from a given session onwards were “easier” and the results are due to this difference between texts rather than between experimental conditions. However, if that was the case, we would observe stable increase in the performance of participants from a given session on. This did not happen in this study, since stable increases tended to be in line with the start of the Dialogue Reading condition that happened in different sessions.

The methodology used does not allow investigating if the dialogic reading effects are reversible or can be generalized to new texts read in non-dialogic way or individually. An interesting research program would be to study the transfer of performance during dialogic readings to simple shared or individual readings. In this survey, the open-ended questions asked by the storyteller exercised the function of prompt (Skinner, 1957) - a supplementary stimulus aimed to strengthen a weak or inexistent relationship of control. Once the prompt fulfills its objective of evoking a target response in a given context, the literature recommends to promptly remove it. This would result in a transfer of the control exercised by the prompt to other relevant contextual stimuli. This process is also known as fading out (Touchette & Howard, 1984). With the participant Lola, for example, whose performance stabilized in 100% of the functions

verbalized in the last four sessions, the prompts could be gradually removed in the following sessions and one could investigate if her performance would be sustained.

In brief, data corroborate the idea that dialogic reading can favor the comprehension of narratives, like in Fontes-Cardoso and Martins (2004) and Flores, Pires and Souza (2014). Therefore, it contributes with the still scarce literature that relates dialogic reading with gains in comprehension of narratives. Most of the surveys about interactive shared reading (e.g., Fontes & Cardoso-Martins, 2004; Lever & Sénéchal, 2011; Whitehurst *et al.*, 1988; Zevenbergen, Whitehurst & Zevenbergen, 2003) comprised children of 2 to 6 years old, used illustrated books with few or no texts, and did not measure the effects on the comprehension of the story, focusing on other aspects (e.g., gains of expressive vocabulary measured through standardized tests). This survey, by finding positive effects of the dialogic reading on the comprehension of texts among children aged 8-13 years, suggests that dialogic reading could promote not only gains in vocabulary, but also the comprehension of the story when interventions during the shared reading (prompts, differential reinforcers and expansions of the child’s responses) are planned to facilitate the control of the child’s verbal behavior through important thematic dimensions of the narrative. Further studies could investigate the specific contributions of each of these components and observe their effects on the comprehension of other text genres.

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