

CEREBRAL PALSY: EFFECTS OF WRITING ON A CHILD'S WRITING

Roseli VASCONCELLOS*
Alessandra DEL RÉ**

- **ABSTRACT:** We attempted to grasp the effect of reading texts on a child's writing. The child, henceforth S., cannot speak or write on her own due to Cerebral Palsy. The teacher reported S.'s difficulties with reading activities, thus a weekly activity involving one of Eva Furnari's books was suggested by the speech therapist at the school-clinic class the child attended. The activity resulted in the child producing several texts. Film transcriptions where these texts were read were added to these productions, which integrated the corpus located in the NALingua-CNPq data bases. The data analysis was based on Borges (2006) who recommends a literacy process through the reading of different texts. The results point to a particular reading and writing acquisition process in which intersections between symbols/writing and writing/writing operate the child's reading process. S.'s writing productions present effects of the matrix-texts read, in a set of mirrors which reveal the functioning of language, and at the same time differences denoting the singularity of a person. Objective and subjective changes due to the assumption of a divergent theoretical approach by the speech therapist in relation to the teacher's approach resulted in objective and subjective changes of the child's relationship to writing.
- **KEYWORDS:** Cerebral palsy. Language. Acquisition of writing skills. Alternative communication. Blissymbolics.

Introduction

Our research deals with introducing writing to a child. S.'s motor disability derives from her neurological disorder – cerebral palsy (CP) – preventing her from oralizing¹ and writing in her own handwriting. However, more than the motor impairment S.

* São Paulo State University (UNESP), College of Letters and Science, Araraquara – SP – Brazil. Researcher in the Department of Linguistics. roselivasconcellos@fclar.unesp.br.

** São Paulo State University (UNESP), College of Letters and Science, Araraquara – SP – Brazil. Researcher in the Department of Linguistics. Araraquara – SP – Brazil. aledelre@fclar.unesp.br.

¹ The term 'oralize' refers to 'orally articulated speech'. See Vasconcellos, 1999, 2006, 2014. Nevertheless, as the term 'vocalized speech' is more commonly used in English, it will be used in this article from now on.

presents, there was something we could observe that seemed to surpass this organic impediment, since the beginning of her school and clinical attendance. The movements the child presented because of her neuromotor dysfunction, already significant and meaningful, even if restricted to glances or pointing and answers to “yes” and “no”, denoted a subject ready for the interpretation of the other. Bearing this aspect in mind, led us to implement Bliss Symbols² in clinical speech therapy with S., which are among the Augmentative and Alternative Communication Systems³, since, in clinical evaluation, the child showed understanding and interest in the transformations and logic that these ideographic symbols involve, which did not occur with the Picture Communication Symbols (PCS)⁴. It is important to note that Bliss offers a broader possibility of addressing language and requires a greater potential in this area than PCS, according to our clinical practice and literature in the field. From the interpretation of data collected in clinical situations, the singular presence of a “spoken body”, which spoke, even though this speech involved modalities other than vocalized speech was evidenced.

Thus, we understand that the fact of not vocalizing speech out does not exclude the subject with CP from a relation with language, since in addition to hearing, this subject listens (DE LEMOS, 1992; ARANTES, 1994; VASCONCELLOS, 1999, 2014; ANDRADE, 2003). In fact, the clinic attests that the motor impairment does not prevent the subject from being symbolically involved, as pointed out by S.’s speech-writing data (VASCONCELLOS, 1999, 2006, 2014). The data reveals that the motor disability cannot be taken as a cause or justification for the problems in this domain, when dealing with subjects who have CP.

In our previous research work the aim was to investigate the clinic. In this article, we propose to investigate S.’s relation to writing, which was introduced in conjunction with the Bliss Symbols (VASCONCELLOS, 1999, 2006, 2010, 2014). We are particularly interested in investigating the effects of a reading activity conducted in the classroom that S. attended, at the request of the teacher, who confirmed S.’s difficulty in performing such a task.

² In the early 1970s, Bliss Symbols appeared as precursors to the graphic-visual systems that figure among Augmentative and Alternative Communication Systems (AACs). This System has the name of its idealizer, Charles Kasiel Bliss (1897-1985). About Bliss, see BCI (2016) and Vasconcellos (1999, 2006, 2010).

³ According to Tetzchner and Jensen (1997, p. 1), “Augmentative and alternative communication involves the use of non-speech modes as a supplement to, or a substitute for, spoken language.” and comprises face-to-face communication capabilities (TETZCHNER; MARTINSEN, 1992) that allow communication for people who present oral and/or writing losses. Augmentative and Alternative Communication Systems are among the features of Augmentative and Alternative Communication (AAC).

⁴ Picture Communication Symbols (PCS) brings together black and white line drawings, originally developed by Johnson in 1981, to be used as Augmentative and Alternative Communication Systems. It is a basically pictographic system, “[...] for whom a simple level of expression is acceptable, because the system has limited vocabulary, although it allows the inclusion of other drawings and photos [...]” (FERNANDES, 2001). It is the most widely used alternative graphic-visual communication system in the world, having been translated into 40 different languages. Original text: “[...] para quem um nível simples de expressão seja aceitável, porque o sistema tem um vocabulário limitado, apesar de permitir a inclusão de outros desenhos e fotos [...]” (FERNANDES, 2001).

Cerebral Palsy

Although attributed to an English surgeon, William Little, in the 1860s the first medical descriptions of a motor disorder affecting some children in their earliest years (NINDS, 2006), it was Freud in his “neurological phase”, who coined the term “Cerebral Palsy,” when he was studying Little Syndrome.

According to the National Institute of Neurological Disorders and Stroke (NINDS), the American agency conducting biomedical research on the cerebral palsies, as well as other neurological disorders, the expression “cerebral palsy” is comprehensive enough and has been used to describe non-progressive neurological disorders, which occur in early childhood and permanently affect body movements and muscle coordination. It is claimed that such neurological disorders are caused by abnormalities in the brain (NINDS, 2006), which hinder movement and postural control. In some cases, it is noted that the motor cortex did not develop according to parameters considered “normal” during fetal growth. In other cases, the injury is assumed to be a result of brain damage that may occur before, during, or after birth. It is important to say that, regardless of the etiology, the lesion is not reversible and the resulting impairment is permanent (NINDS, 2006).

From the medical point of view, CP symptoms differ from one person to another, according to type and severity and may change over time. Type and severity are determined by the extent and location of the neurological lesion. The classification of CP is circumscribed by the nature of the motor disorder involved: spasticity, athetosis or ataxia⁵. The motor impairment resulting from the neuromotor sequel can also result in different levels of vocalized speech: the oral expression of people with CP is marked by the nature of motor impairment and there are cases in which it becomes impracticable.

Additional symptoms may occur such as mental deficiency, seizures, growth failure and spinal deformities, in addition to others such as incontinence, visual and auditory impairment, as well as perceptual and sensory abnormalities.

In most CP cases, the lesion is present from birth (congenital CP). However, it can take a long time to be detected. Acquired CP occurs to a lesser extent and is related to changes that happen after birth (brain damage in the first months or years of life, brain infections such as bacterial meningitis or viral encephalitis, trauma due to accidents or falls). According to NINDS (2006)⁶, the other 90% to 95% of CP cases result from four types of brain damage that lead to typical symptoms⁷: (1) White matter injury (Peri-Ventricular Leukomalacia – PVL); (2) Abnormal brain development (Brain Dysgenesis); (3) Cerebral Hemorrhage (Intracranial Hemorrhages); (4) Brain damage caused by brain oxygenation lack (Hypoxic-ischemic Encephalopathy or Intrapartum Asphyxia).

⁵ Regarding the classification of different CP types, see NINDS (2006) and Monteiro (2001). It should be noted that CP motor disorders often do not correspond to only one type, but to a combination of them.

⁶ The data we bring here about the definition and etiology of CP are the result of recent research, gathered at NINDS (2006).

⁷ On the characterization of brain damage types compatible with CP, see NINDS (2006).

Neuroimaging techniques allow for visualization of abnormalities and make it possible to treat neuromotor problems. Magnetic resonance imaging may indicate the location and the type of lesion. Cranial ultrasonography is more commonly used with premature infants because it is less aggressive, although it is not very effective in capturing subtle alterations of the white matter. Computed tomography is able to generate images of brain structure in injured areas. These techniques allow the problem to be mapped with greater precision.

Despite the importance of a dialogue with Medicine to understand the research subject S. in her relationship with alphabetic writing and in her inability to organically commit herself, we intend to highlight that there is something that goes beyond the motor impairment of this subject with CP: her presence in language, even if she is not able to express herself orally.

Writing acquisition and Cerebral Palsy

In the search for studies related to the acquisition of writing in the case of subjects with CP who do not vocalize speech, we find the absence of work presenting data of these subjects' written productions and research similar to ours, suggesting the text as a starting point for writing acquisition.

In this paper, we present some studies that focus on the importance of knowing graphic-visual communication systems, as well as software that facilitate these subjects' access to alphabetic writing (CAPOVILLA; CAPOVILLA; MACEDO, 2001; CAPOVILLA, 2008, HEIDRICH et al., 2010; OLIVEIRA; ASSIS; GAROTTI, 2014; TOLEDO; ROGATO, 2010; HEIDRICH; SANTAROSA; FRANCO, 2012; JORDAN; NOHAMA; BRITTO JÚNIOR, 2009; FREIRE, 2002).

It is noteworthy that in some of these research studies only the acquisition of writing at the vocabulary level is privileged and associated to symbols or figures; the subjects' writing data is not presented and the positive results are only confirmed (OLIVEIRA; ASSIS; GAROTTI, 2014; TOLEDO; ROGATO, 2010; CAVALCANTE, 2012). It seems to us that such research studies are aimed more at emphasizing or diffusing the supposed effectiveness of the software and less at the process of acquiring writing itself.

Some authors point out the importance of phonological awareness development in the literacy of these subjects who do not vocalize speech (HOFMANN; TAFNER; FISCHER, 2000; CAPOVILLA; GUTSCHOW; CAPOVILLA, 2004; TOLEDO; ROGATO, 2010; OLIVEIRA; ASSIS; GAROTTI, 2014). According to Seabra (2009), the studies of Millar, Light and Mc Naughton (2004) and Johnston et al. (2009) show that programs which develop phonological awareness and promote the teaching of graphophonetic correspondence are effective to increase reading and writing performance with users of Augmented and Alternative Communication who do not vocalize speech.

On the other hand, Seabra (2009) quotes Paul (1997) and Sandberg and Hjelmquist (1996) who refer to studies which suggest that the phonological development awareness

may be relatively independent of speech, so that subjects unable to vocalize due to neurologic lesions (dysarthric) can perform tasks of analysis and manipulation of phonological information very well. These studies, according to Seabra (2009), suggest that the deficit in phonological awareness is more related to lack of stimulation than to intrinsic limitations of the condition.

There are papers that refer to Teberosky, Colomer and Moll (2003) as a theoretical reference (HEIDRICH et. al, 2010) or Vygotsky (2000) and (HEIDRICH; SANTAROSA; FRANCO, 2012) as a starting point for the investigation of reading and writing acquisition in children with CP.

Other authors understand reading and writing as a behavior to be acquired by the child with CP and advocate that the development and systematization of a teaching procedure that starts with Experimental Analysis of Behavior (AEC), an approach that derives from research called equivalence of stimuli (RODRIGUES; MEDEIROS, 2001). On the other hand, there are those who associate this theoretical framework with the use of strategies and resources of Assistive Technology and teaching technology (OLIVEIRA; GAROTTI; SÁ, 2008) or propose this correlation, besides the association with the methodology of phonological awareness combined with the use of low-cost individualized technologies (ALVES DE OLIVEIRA, 2008).

According to Seabra (2009), many children with CP do not have access to reading and writing because priority is given to basic skills such as communication and self-care or due to parents' and teachers' low expectation of literacy in the case of Augmentative and Alternative Communication users. Seabra (2009) reports that 70-90% of Alternative Communication users present a low reading and writing performance, which could be associated with the restricted opportunity of contact with reading and writing at preschool age, intellectual downgrading, language problems or absence of functional speech and downgrading to phonological awareness. Still according to Seabra (2009), these factors may be associated with different causes, such as neurological impairments, social or pedagogical limitations.

The problem

After the clinical and pedagogical assessment, our subject S. seemed to have every chance of making great strides in relation to her schooling process but, according to the teacher, the child had difficulty mainly with reading. In meetings with students and the teacher in the classroom, several aspects related to the proposals and practices addressed to this group of children that aimed at literacy were observed:

- (1) The initial investment in writing was focused on recognizing the letters of the alphabet and working with isolated words taken from didactic materials;
- (2) The theoretical basis assumed that the child had hypotheses about writing;

- (3) Blocks of wood with letters corresponding to a certain word dictated by the teacher, plus a few more, were offered to the children. Perhaps, in the teacher's imagination, this kind of procedure was enough to "guarantee" that the child would make the correct composition of the word. In the dictation, the teacher emphasized each word sound, as if she wanted to "facilitate" the task, implying that the phoneme/grapheme correspondence determines the child's writing acquisition process;
- (4) The children had to produce short texts from a hypothetical figure or situation (such as their weekend) and not from written texts. For their production of texts, the children had symbols, letters of the alphabet, numbers and punctuation signs arranged on their communication boards.

The teacher reported that she had some difficulties regarding the types of text offered to those children, supposedly related to CP, since the texts offered should be well taken care of regarding the size and type of letter and the spacing between the lines (adapted to the difficulties of each child), to the size and complexity of the content.

Understanding the difficulty of the children in this way brought some consequences: they ended up being rarely submitted to the reading of texts; the records of their productions were made by someone who lent them the gesture of writing (which was not always reliable); they were prevented from returning to what they had written (as oftentimes the teacher recorded the child's productions, but this was not a guarantee that the child could follow this record).

Besides, these children's written productions were characterized by the absence of written marks, such as punctuation, for example. In fact, they contained marks of orality and difficulties with vocabulary boundaries, which made it clear that written texts were not the starting point for these productions.

The ultimate goal of literacy should have been the representation or communication of meanings in the reading and the writing of texts, which shows that writing was conceived as a representation of orality, as a matrix of fixed meanings to be discovered by the child. The error – a valued instance in the language acquisition process by Brazilian Interactionism, a theoretical vector adopted in the present article – was erased, disregarded and not elevated as constitutive.

Language, in pedagogical and even in clinical practice involving children with CP, was seen as an accessory, since it was anchored in the Genetic Epistemology of Jean Piaget (1986), a theory according to which sensorimotor work is a foundation on which the cognitive structure itself and language, at last, came to name the concepts acquired by the child. The investment in children with CP should then recover the sensorimotor steps they had not fulfilled, due to their organic impediment, so that language was reached as an ultimate result. It is necessary to remember that, in the case of these children, gaps were detected between stages, which, according to a Piagetian developmental perspective, would prevent a new stage from being inaugurated.

It must also be remembered that many of these children do not even come to vocalize speech, or even experience the articulation of some sounds. How can we expect them to arrive at writing if we look at the process they should follow from a point of observation that predicts the fulfillment of a series of steps and their organization? (FERREIRO; TEBEROSKY, 1986). If there is no possibility of vocalizing speech, how can we understand it as previous, in the sense of it being “necessary” for a supposed oral-written correspondence to be established?

In a path to be traced according to the assumptions previously outlined, the child with CP and, especially, the one who does not vocalize speech, would be doomed to failure in the acquisition of writing skills or in presenting a pathological relation with this modality of language.

Our proposal

In view of the above issues, we proposed an investment in reading to understand its effects on S. We sought an alternative way of presenting alphabetic writing to this child and her classmates.

It was a matter of discussing S.’s writing acquisition taking into account some theoretical assumptions that emphasize impediments and disabilities which end up limiting what could/should be presented to this subject.

We hypothesized that children with moderate to severe neuromotor abnormalities, such as S., could acquire writing skills as long as (1) their potentialities were not revealed by the preconception that they needed materials, special methods and conditions according to beliefs and (2) it was possible to access different written texts, so that their productions can be submitted to the functioning of language (the Other), endorsed by the other as the place of functioning of constituted language (teacher or speech therapist, in the present research). We argue that, in the case of such children beginning to write, it can occur in a pleasurable way, without a pathological relationship with writing being necessarily established or assumed in advance.

Theoretical anchorage

When we planned and performed the activity in S.’s classroom, the work of Mota⁸ (1995) seemed to be, at the same time, a challenging and unique way to guide the proposal of investing in reading and writing aimed at S. and her classmates. This is because Mota’s (1995) proposal is precisely based on a theorization – Brazilian Interactionism in Language Acquisition as formulated by De Lemos⁹ – which, conceived by the

⁸ Mota’s (1995) thesis later gave rise to the book published in 2006. In this research, we will refer to both the book and the thesis. It is important to mention that the names Borges and Mota refer to the same researcher.

⁹ The Brazilian Interactionism in Language Acquisition started as a theoretical aspect at the University of Campinas – UNICAMP – in the late 1970s and went through different phases. Ester Scarpa, Maria Cecília Perroni, Rosa Attié

research group coordinated by Lier-DeVitto, it has already guided our questions arising from the Language Clinic involving children with CP. The author seeks theoretical support in Saussure and Jakobson in the field of Linguistics and in Derrida and Lacan in the field of Philosophy and Psychoanalysis. Mota (1995) states that the complexity of the literacy process seemed to have been lost amid its simplification. Therefore, she argues that the process does not consist of a mere codification or mechanical decoding of words (MOTA, 1995; BORGES, 2006, p. 14).

At this point, we highlight the moment of theorization of Brazilian Interactionism that forms the basis of the work made by Borges as well as ours. From 1992, De Lemos began to approach European Structuralism, through the reading of Lacan. We can take this moment as a trigger for a complex relationship between Linguistics and Psychoanalysis, when theorists begin to discuss the “relationship among child-language-speech of the other” and there is a definite break with Developmental Psychology (DE LEMOS, 1992).

Metaphorical processes (substitution operations) and metonymy (contiguity operations), the laws of internal language composition (MILNER, 1987), are called to explain the changes in children’s speech and their passage from *infants* to speakers. The articulation between language and speech, as idealized by Jakobson (1960) based on Saussure (1972), is made explicit.

It is from that moment that changes in a child’s speech are seen, according to Interactionist theory, as structural effects. They are seen as subject changes of position regarding the speech of the other, the language and the child’s own speech. The theory is scaled up by the need for articulation among language-speech-speaker. The difficulty of relating language’s subjectivation and objectification processes is added. Interactionism:

[...] goes in the sense of defining the acquisition of language as a subjectivation process shaped by changes in the child’s position in a structure in which the *langue* and *parole* of the other in its full sense are inextricably related to a pulsional body, i.e., the child as a body whose activity demands interpretation. (DE LEMOS, 2002, p. 28).¹⁰

In this constitution of De Lemos Brazilian Interactionism (2002), we speak of “capturing” the subject through language (and not “appropriation” of language by the child). It can be understood, therefore, that the “other” of the child is conceived as the “other speaker”, as “instance of the constituted language; as an instance of linguistic-

Figueira and Maria Fausta Pereira de Castro participated in the project during De Lemos doctorate and Castro has been leading the project since the beginning of the current century.

¹⁰ Original text: “[...] vai no sentido de definir a aquisição da linguagem como um processo de subjetivação configurado por mudanças de posição da criança numa estrutura em que *la langue* e a *parole* do outro, em seu sentido pleno, estão indissociavelmente relacionados a um corpo pulsional, i.e., à criança como corpo cuja atividade demanda interpretação.” (DE LEMOS, 2002, p. 28).

discursive functioning” (DE LEMOS, 1992, p.128) and not as an “other-social” one (LIER-DEVITTO, 1996, 1998, our quotation marks).

Borges (2006) states that De Lemos (1995) research has led her to realize that, also in the field of literacy studies (as in language acquisition), the linguistic nature of the process has not been recognized and as a consequence,

[...] the acquisition of writing is reduced to the supposed construction of a perceptual-cognitive relationship on the relations of representation between writing and orality. As a consequence of the presuppositions adopted – from the field of Psychology and linguistic theories – the description of the process is limited to the ‘steps’ that the child takes in the construction of ‘correspondence’ between oral and written language. (BORGES, 2006, p.20, author’s quotation marks).¹¹

In this way, initial writing is excluded from the descriptions and the process of acquiring writing is reduced to the construction of representations of the language constituted from relations already established in the child’s speech that, hopefully, will be represented in his/her writing. Also in literacy theories, Borges (2006) states that there is little or no place left for the Other as an effective presence in the child’s writing.

According to Borges (2006), the affiliation to Brazilian Interactionism led her to recognize what is common between the processes of acquisition of oral and written language: the effects of language functioning itself, i.e., the process of mirroring (DE LEMOS, 1995) led the researcher to manage a radical shift in the understanding of the *raison d’être* of literacy practices, as well as their effects on the writing acquisition process:

[...] our perceptions of the teacher’s role, the nature of the text, and child-text relationships were affected because the notions of language, *langue*, and discourse were [set in motion]¹². Finally, there was a displacement of all the theoretical presuppositions on which the experiment was based. From that point on, our effort in the classroom has become, above all, to describe the effects of intensification of children’s relationships with written language on their own writing. It was, after all, the description of the ‘effect of language on language itself’, as De Lemos (1992, p. 127) said (BORGES, 2006, p.21).¹³

¹¹ Original text: “[...] a aquisição da escrita fica reduzida à suposta construção de uma relação perceptual-cognitiva sobre as relações de representação entre escrita e oralidade. Em consequência dos pressupostos adotados – do campo da Psicologia e de teorias linguísticas – a descrição do processo limita-se aos ‘passos’ que a criança dá na construção das ‘correspondências’ entre a linguagem oral e a escrita.” (BORGES, 2006, p. 20, aspas da autora).

¹² We inserted a word in square brackets because it was missing in this quote from Borges (2006). We chose the expression “set in motion” to complete it.

¹³ Original text: “[...] foram afetadas as nossas percepções do papel do professor, da natureza do texto e das relações criança-texto porque foram [movimentadas] as noções de linguagem, língua e discurso. Houve, enfim, um deslocamento

For Borges (2006, p.21), “[...] to place the possibility of ‘productivity’ in the reading and production of the text on the acquisition and development of the child’s writing means to attribute primacy on the work of the signifier in this process [...]”¹⁴, which explains, according to this author, the systematicity present in the movements of composition and decomposition of combinatorial possibilities in children’s writing. Its purpose is to “understand the effects of reading and the production of texts in the literacy process” (BORGES, 2006, p. 15)¹⁵. The representational position of literacy research, which places the subject as an observer, is questioned by Borges (2006) who argues that:

[...] ‘making the term-to-term correspondence’ as Ferreiro suggests, implies that the child, as the subject of his/her literacy process, objectifies oral and written words, subjecting them to analysis and synthesis. Thus, only when the logic that regulates their representation relations is constructed, it would be possible for the child to understand how, point by point, graphic units take the place of phonological units of representation. (BORGES, 2006, p.93, author’s quotation marks).¹⁶

However, and it matters, Borges (2006) considers that:

Understood in this way, language inevitably ‘loses’ its systematicity. Letters, sounds, syllables and words are artificially removed from linguistic-discursive functioning, making it impossible to constitute them as linguistic terms, when positivity, a substance, that is, a value of its own is attributed to them. In terms of graphemes and phonemes, their negative and relational natures are not recognized, which only allows for an actualization, that is, a value, in the game of language functioning [...] (BORGES, 2006, p. 93-94, author’s quotation marks).¹⁷

do conjunto dos pressupostos teóricos sobre os quais a experiência se embasava. A partir desse momento, nosso esforço na sala de aula tornou-se, sobretudo, o de descrever os efeitos da intensificação das relações da criança com a linguagem – escrita – sobre a sua própria escrita. Descrever, afinal, como disse De Lemos (1992, p. 127), ‘o efeito da linguagem sobre a própria linguagem’.” (BORGES, 2006, p. 21).

¹⁴ Original text: “[...] depositar no texto – leitura e produção – a possibilidade de “produtividade” quanto à aquisição e ao desenvolvimento da escrita das crianças significa que atribuímos primazia ao trabalho do significante nesse processo [...]”. (BORGES, 2006, p. 21).

¹⁵ Original text: “compreender os efeitos da leitura e da produção de textos sobre o processo de alfabetização” (BORGES, 2006, p. 15).

¹⁶ Original text: “[...] ‘fazer a correspondência termo a termo’, como sugere Ferreiro, implica que a criança, como sujeito de seu processo de alfabetização, objetive as palavras orais e escritas, submetendo-as à análise e à síntese. Assim, só quando construída a lógica que regula as suas relações - de representação -, seria possível à criança compreender como, ponto por ponto, as unidades gráficas assumem o lugar de representação das unidades fonológicas.” (BORGES, 2006, p. 93, aspas da autora).

¹⁷ Original text: “Compreendida desse modo, a linguagem, inevitavelmente, ‘perde’ a sua sistematicidade. Letra, som, sílaba e palavra são artificialmente retirados do funcionamento linguístico-discursivo, impossibilitando a constituição deles como termos linguísticos, no momento mesmo em que lhes é atribuída uma positividade, uma substância, ou

Hence the importance of introducing written texts when a child is starting to write, in the author's point of view, which would determine the deconstruction of literacy as a process of representation.

Borges (2006) developed her research based on the writing skills acquisition of 30 children between the ages of six and nine, in different moments of their relationship with writing (some of them were already able to write, and others scribbled or drew when they were asked to write). Collective situations of reading and writing involving different kinds of texts were distributed to the children. After reading the texts, the children were invited to write "their own" texts and they could exchange ideas about the content or the form of the matrix-text, or about their own productions. According to Borges (2006), they tried not to explain rules for the children's written production, for example, graphic aspects and linguistic relations, or content, mainly to avoid the understanding that to read or write it is necessary to fragment words into syllables and make correspondences between graphic and phonic units.

Even though the children's writing in Borges's research (2006, p.22) could not be considered as "text", it had a "text style" that refers to something alive, ongoing, "something to be discovered": there was meaning in its lack of meaning. The play of letters in children's writing, which constitutes pseudo-words and pseudo-sentences can be seen, according to Borges (2006, p.147) as "[...] the effect of the inscription of the discourses of the Other, represented in the classroom by oral discourses and matrix-texts, in their 'memory extracts'"¹⁸:

Thus, letters, pseudo-words, pseudo-sentences, units of all sorts – which have no value in themselves – assume, albeit provisionally, structural values and places [...] determined by the positions open to them in oral and writing discourses of the Other, that is, of those who circulate in the classroom. The status of 'signifier' of the units at stake gives them this virtuality. (BORGES, 2006, p. 148, author's quotation marks).¹⁹

In order for the child to have access to written language, he/she needs the "other-discourse" and it is the role of the teacher to interpret the child's production as a written text. The teacher is, therefore, given a place of supposed knowledge and he has the power to pull the child's writing out of its "drift". The teacher had to define what was

seja, um valor próprio. Do ponto de vista do grafema e do fonema, não são reconhecidas as suas naturezas negativas e relacionais, que só permitem a atualização, isto é, um valor, no jogo do funcionamento da língua [...]" (BORGES, 2006, p 93-94, aspas da autora).

¹⁸ Original text: "[...] efeito da inscrição dos discursos do Outro, representado na sala de aula pelos discursos orais e textos-matriz, em seus 'extratos de memória'." (BORGES, 2006, p. 147).

¹⁹ Original text: "Assim, letras, pseudopalavras, pseudofrases, unidades de toda natureza – que não têm valor em si mesmas – assumem, ainda que provisoriamente, valores e lugares estruturais [...] determinados pelas posições que lhes são abertas nos discursos orais e escritos do Outro, ou seja, daqueles que circulam em sala de aula. O estatuto de 'significante' das unidades em jogo lhes confere essa virtualidade." (BORGES, 2006, p. 148, aspas da autora).

and what was not written texts, based on the child's oral discourses, allowing the child to participate in his/her reading and writing practices (BORGES, 2006).

Borges (2006, p. 149) states that "in these processes the child is captured by writing"²⁰, but it is not a question of being a spectator, but rather the participation in situations in which oral discursive practices give meaning to writing. It is a reference to the writing act in which the child will "recognize the reading act as another way of speaking" (DE LEMOS, 1998, p.11)²¹.

Borges' research data (2006) shows that it is through repetition of someone else's knowledge – of the teacher, who is already in the "symbolic" place of constituted writing – that access to the "symbolic" is possible and this is how the child can go from an intuitive or "imaginary" relationship with writing to a "symbolic" one. In children's initial writing, letters and drawings mix themselves and the insistence of the letters in their dimension of drawing or geometry makes us think of the *The instance of the letter in the unconscious* (BORGES, 2006, p. 152). In an article with the same title, Lacan (1998, p.225) says "we designate a letter as the material support that concrete discourse lends to language"²². It is precisely because they have a physiognomy (materiality) that letters support the concrete discourses, and, this is why they establish relationships, gaining an unrepresentative but symbolic nature.

It is worth noting here that the idea of "capturing" the subject by language in literacy, according to Borges (2006), based on De Lemos (2002), refers to the conception of oral or written language acquisition as a subjectivation process in which the subject is conceived as a body-language, that is, as a body whose action demands interpretation and whose listening allows us to interpret what comes from the other as language. Differently, in a writing skills acquisition proposal based on the representation of orality, the child is expected to "learn to write" from pre-defined rules that regulate the relations between written and oral language in the attempt to homogenize their initial written productions.

In the words of Borges (2006, p.229):

Writing has the force of subjectivation because it neither expresses nor is the expression of fixed categories. Its properties make it a relationship game. There is polysemy, sliding, change of unit status according to the movement of *diferencia*²³ established between units. In the intervals opened in this game, the emergence of the subject is possible.²⁴

²⁰ Original text: "nesses processos, a criança é capturada pela escrita" (BORGES, 2006, p. 149).

²¹ Original text: "reconhecer o ato de ler como outro modo de falar" (DE LEMOS, 1998, p.11).

²² Original text: "designamos por letra esse suporte material que o discurso concreto empresta à linguagem". (LACAN, 1998, p.225).

²³ *Diferencia* is a term used by Derrida (1973). The expression "movement of *diferencia*" refers to the notion of value in Saussure, and, therefore, to the functioning of language, capable of producing differences.

²⁴ Original text: "A escrita tem força de subjetivação porque não exprime nem é expressão de categorias fixas. Suas propriedades fazem dela jogo de relações. Há polissemia, deslizamento, mudança de estatuto das unidades conforme

For Borges (2006), the notion that linguistic-discursive functioning is constitutive of the child's writing questions the possibility of objectifying this writing, while, at the same time, discusses its teaching. The author argues that, in the teaching perspective, writing transforms the child into a "mere user or vehicle of a system" expected to "[...] learn to write from the previously defined rules representation which regulate the relations between written and oral language [...]"²⁵ (BORGES, 2006, p. 226).

Borges (2006, p.238) concludes her research by saying that its core – the child's initial productions – "[...] may be a privileged place for literacy process analysis, i.e., the alienation of writing to the Other, albeit in constitution, as well as the subject's emergence in the breaches of its significant chains [...]"²⁶. Concerning the movement of insertion of signifiers into the chain and the latent chains in the initial process of the child's relationship with reading and written texts, Borges (2006) brings the magic block metaphor that Freud (1973) uses to explain the notion of a mnemonic trace. In turn, Lacan (1986) assimilates it as being significant: "[...] the magic block metaphor refers to the movement between significant chains. While one appears clearly, another one, which is parallel to it, only appears interstitially and symptomatically, although remaining inscribed 'in the wax' [...]" (BORGES, 2006, p. 162)²⁷.

According to Borges (2006, p.239),

Letters are, ultimately, what the scissors of language [or repression] cut out from the text of the Other, constituting the text of the child, already elevated to the position of signifiers. Neither author nor plagiarist: it is the movement of letters that constitute the subject that emerges in a child's writing – although strange. It is strange, because the metaphorical-metonymic functioning, as the work of a signifier, sometimes dissolves the communication effect of language.²⁸

Regarding Freud's notion of repression (1973), Borges (2006) brings Lacan (1991) and his metaphor of day and night, which states that "a signifier, to be uttered, must

o movimento da *diferencia* – que se estabelece entre unidades. Nesse jogo, nos intervalos que abre, é possível a emergência do sujeito." (BORGES, 2006, p.229).

²⁵ Original text: "[...] aprenda a escrever a partir de representação das regras – previamente definidas – que regulam as relações entre a linguagem escrita e a oral [...]" (BORGES, 2006, p. 226).

²⁶ Original text: "[...] pode ser um lugar privilegiado de análise do processo de alfabetização, ou seja, da alienação da escrita, ainda que em constituição, ao Outro, assim como da emergência do sujeito nas brechas de suas cadeias significantes [...]" (BORGES, 2006, p. 238).

²⁷ Original text: "[...] a metáfora do bloco mágico fala do movimento entre cadeias significantes. Enquanto uma comparece manifestamente, outra, que lhe é paralela, só comparece intersticialmente, sintomaticamente, embora permaneça inscrita 'na cera' [...]" (BORGES, 2006, p. 162).

²⁸ Original text: "As letras são, em última instância, o que a tesoura da língua [ou recalque] recorta do texto do Outro, vindo constituir o texto da criança, já, então, alçadas à posição de significantes. Nem autor, nem plagiador: é o jogo das letras que é constitutivo do sujeito que emerge na escrita - ainda que estranha - da criança. É estranha, porque o funcionamento metafórico-metônímico, como trabalho do significante, por vezes dissolve o efeito de comunicação da linguagem." (BORGES, 2006, p. 239).

emphasize the other” (LACAN, 1991, p. 85)²⁹. In other words, latent signifiers must be repressed in order for the child to advance in his/her relation to writing, without, however, achieving its completeness.

If Brazilian Interactionism of De Lemos is the starting point for thinking about the acquisition of alphabetic writing in Borges (2006), so is the Language Clinic³⁰. According to Lier-DeVitto (2006), categories or nodal operations of Interactionism proposed by De Lemos were mobilized to think about issues raised by “symptomatic speech” and by the clinic that acknowledges them. Therefore, they must be thought of as a “difference”.

In the context of this singular interaction, interpretation must be thought in relation to the problematic of the symptom in speech: it is an event in speech that expresses the subject’s prison in a fault or failure (LIER-DEVITTO; ARANTES, 1998) which prevents him to “move to something else” (expression from ALLOUCH, 1995). A symptom differs, therefore, from an error, as much by the resistance that it imposes to interpretation/change, as by the particular effect that it produces in the listening of the other. The reflections of Lier-DeVitto (2006) on the symptom in speech also deviate from the appeal to chronology. Thus, says the author, the time of the symptom is not chronological, but it is the time of insistence and of repetition³¹.

There is a lack of knowledge about why this speech is “disarranged” and about the impossibility of the subject changing it: these are indications that the form of the subject’s presence in speech implies the hypothesis of the unconscious introduced by Freud (LIER-DEVITTO, 2006, p. 187). Here we bring the notion of symptom in speech – and writing –, so that we can analyze the productions of our subject S. in the relationship she establishes with alphabetic writing. In the present research, we intend to discuss the erratic character of her written productions. Are they symptomatic?

Methodology

The focus of our study was to analyze productions of our subject of research, S., who does not vocalize speech, based on reading situations and on some of this child’s texts, made in her personal computer after the readings.

Activities were filmed in the literacy room of an integrated school-clinic in the city of São Paulo. The group was composed of six children with cerebral palsy, including S. From the six children, only two were able to communicate orally. S. joined the

²⁹ Original text: “um significante, para ser proferido, tem de recalcar o outro” (LACAN, 1991, p. 85).

³⁰ It is a theoretical effort that since 1990 has been carried out in the CNPq Integrated Project, first named “Acquisition of Language and Pathologies of Language” and, as of 2000, “Acquisition, Pathologies and Language Clinic”, by the CNPq Research Group, under the coordination of Lier-DeVitto and Arantes, at LAEL, PUC/SP.

³¹ It is a fact, says Lier-DeVitto (2006), that the listeners’ listening captures a repeating speaker, and the clinician, in turn, faces resistant speech. The time of the subject in the symptom suspends chronological time, suspends that of the development. Concerning the subject of symptom in Language Clinic, see also Lier-DeVitto (2003).

classroom and the institution when she was six years and one month old. It was a special private school and S.'s classmates were between six and fifteen years of age. This association of parents counted on a team of teachers graduated in pedagogy, under the coordination of a pedagogue and another clinic team, composed of speech therapists, occupational therapists, physiotherapists and a psychologist under the coordination of a physiotherapist. Both teams worked in an integrated manner and, in addition to individualized clinical services, carried out activities and/or orientations in classrooms, according to students' needs and teachers' requests. The filmed activities were performed by the speech therapist, at the request of the teacher who referred to S.'s difficulties with reading and did not have a pedagogical character.

We clarify that this school-clinic followed an orientation based on Piagetian assumptions. Our proposal, differently, followed an approach based on the Brazilian Interactionism assumptions in which language is foundational and the subject is that of desire. The approach we proposed was based on texts, and considered linguistic-discursive functioning. In this approach, the acquisition of writing by a child is not a linear process, and has its vicissitudes, changing according to the effects of the constituted reader's interpretation who authorizes the child's writing and reading to move towards the position of a reader/writer.

In one-hour weekly activities, with the participation of the classroom teacher and assistant, the reading of one of Furnari's books (1983), *The charming little witch and her secret admirer Gregory* was carried out. This work lasted for six months, when S. was between 8 years and 7 months old and 9 years and one month old. The choice of this material was made by the speech therapist because it contained different kinds of letters and genres such as messages, telephone conversations, cartoons, illustrations with legends and texts referring to them and dialogues between the characters.

The book was read page by page ('in chapters'), with the text transposed on the board in each activity, which generated suspense, provoking the interest and curiosity of the children who tried to turn the page to see the sequence of the story, at the end of the activity.

The filming of the activities occurred with an irregular frequency, as they were dependent on the availability of the necessary equipment. To type the texts produced by S. in the classroom activities, the child made use of a tip attached to a helmet, and to facilitate access to the keys, S. used a key separator, consisting of an acrylic plate placed over the computer's keyboard.

The data extracted from the filming for the research proposed here focuses on S.'s productions and also shows moments of her joint writing with the other classmates.

During the activities carried out in the literacy room, the children – who were almost exclusively wheelchair users, excepting R., who had a table and chair adapted to his needs – were all facing the blackboard. The speech therapist stood in front of them, from where she carried out the proposed reading. Each child had his/her own text arranged on the table attached to his/her wheelchair. The children who could speak also had a table with the letters of the alphabet on their table so they could

participate writing, when they wanted to, or as the speech therapist requested their participation. The children could write/read indicating Bliss or PCS symbols and the alphabet or both, according to their relationship to writing. The teacher and the classroom assistant followed the placements of the children on their boards, which were transposed by the speech therapist to the blackboard, in capital or small letters, according to the text that was being worked on.

The texts were read by the speech therapist and then vocalized with the students. Sometimes, this vocalization took place during the reading process, because “[...] the first relations between fragments occur in the dialogue, as a linguistic-discursive effect of adult speech on the child’s speech, the effect of language on language.” (DE LEMOS, 1998, p. 15)³². De Lemos (1998) refers to the thesis of Mota (1995), which shows that “[...] just as the fragments of adult speech return in child’s speech as signifiers of the discursive situation established by the adult text-speech, graphic aspects of written texts are replaced in the child’s initial writing” (DE LEMOS, 1998, p. 15)³³. This is because these “writing fragments”, in which aspects of oral discursive practice were inscribed, place the child in a meaningful relationship with written texts. They

[...] do not ‘represent’ this speech sounds which made them somehow perceptible. Nevertheless, it’s possible to think that, by being in touch with other fragments of writing, in which other oral discursive practices were inscribed, they were re-signified, i.e., they were perceived by the student in other of its graphic aspects. (DE LEMOS, 1998, p. 15, author’s quotation marks).³⁴

Thus, these reading and writing practices began to re-signify, in the next reading activity, both the writing, in the productions of these children from the read and vocalized texts, and their reading, since these children were summoned to rewrite what had been previously read collaboratively, each child doing it “in his/her own way”. This rewriting was copied by the speech therapist on the blackboard.

S.’s written productions were analyzed from a qualitative approach and considering the importance of privileging the singularities in her relationship with alphabetic writing acquisition. We selected, among the several texts produced by S., those that bring marks/traces of the book texts read in the classroom.

³² Original text: “[...] as primeiras relações entre fragmentos se dão no diálogo, como efeito linguístico-discursivo da fala do adulto na fala da criança, efeito de linguagem sobre linguagem.” (DE LEMOS, 1998).

³³ Original text: “[...] assim como os fragmentos da fala do adulto retornam na fala da criança como significantes da situação discursiva instaurada pelo texto-discurso do adulto, aspectos gráficos de textos escritos se repõem na escrita inicial da criança.” (DE LEMOS, 1998).

³⁴ Original text: “[...] não ‘representam’ os sons dessa fala que os tornou de alguma forma perceptíveis. Contudo, é possível pensar que, entrando em relação com outros fragmentos de escrita, em que se inscreveram outras práticas discursivas orais, eles sejam ressignificados, isto é, deem-se a perceber para o alfabetizando em outros de seus aspectos gráficos.” (DE LEMOS, 1998, p.11, aspas da autora).

It is worth mentioning that the data collected in the classroom, which were described here, is part of a database from the NALingua-CNPq Group (Nucleus of Language Acquisition Studies)³⁵.

The subject of the research

There are some details about S.'s case that, we believe, will allow a better understanding of S.'s real impediments from the organic point of view, impairments that contrast with her skills in relation to language.

S. presents a dystonic quadriplegic CP with an athetoid component³⁶ as a perinatal anoxia³⁷ sequel caused by an umbilical cord compression. When she was five months old, it was possible to observe that she presented slower motor development. The tomography and the electroencephalogram (EEG) asked by the neurologist, presented normal results. A new EEG was performed when she was 4 years old and the results showed a brain irritative activity.

S.s motor evaluation exhibited pathological reflexes³⁸ (ACTR, SCTR, LTR and Moro) and involuntary movements, as well as absence of trunk control and poor head control. These findings uncovered a motor condition which prevents S. from writing by herself. The evaluation also revealed absence of perceptual impairments associated to the motor disabilities.

From an oral motor point of view, the functions related to feeding were compromised by the presence of pathological oral reflexes that resulted in S.'s dependence to perform DLA (daily life activities). The child presented sialorrhea³⁹ and absence of vocalized speech, although she expressed herself in other ways. She communicated by looking or pointing, using reflex activity (ACTR) and moving her head to answer "yes" or "no".

Simultaneously with classroom activities at the school-clinic that she attended, the child was evaluated in individual speech therapy in two weekly sessions, with the main objective of investing in her possibilities of language and communication, since she was unable to vocalize speech due to her global and oral motor condition.

Bliss symbols were introduced to this child in clinical sessions, with the reading of diary texts written by S.'s mother and also from oral and/or written school texts and from clinical sessions. The therapist was guided by the effects of this reading on the

³⁵ The NALingua-CNPq Group (Group of Studies in Language Acquisition) is composed of professors from different institutions in Brazil and in France and of students (IC, master's and doctorate), whose main objective is to study the language acquisition process, each one from their own theoretical point of view.

³⁶ S. presents severe dystonic CP (abrupt changes in tone ranging from hyper to hypo) with an athetoid component (presence of involuntary movement).

³⁷ Anoxia is the lack of oxygen supply to the brain.

³⁸ Asymmetric Cervical Tonic Reflex, Symmetrical Cervical Tonic Reflex, Labirintic Tonic Reflex and Moro Reflex. For more information on this topic, see Finnie (1980).

³⁹ The term "sialorrhea" corresponds to the presence of intense and constant drool, which indicates alteration of intra and extra-oral sensitivity.

child, as well as by the oral texts present in the clinic and in the classroom. The child chose the symbols that were organized in the form of a communication board (see figure 1)⁴⁰, which, therefore, had its own characteristics.

S. had a desk attached to her wheelchair on which lay her communication board with Bliss symbols⁴¹, letters, numbers, punctuation marks, some logos and phrases written in Bliss. S. indicated them by means of looks and confirmed the letters and symbols read by the therapist with nods to “yes” and “no”. After choosing a block of symbols, letters or numbers, S. passed to the column containing the symbol and, to select it, followed the therapist’s gesture, which ran through the columns of the block, until a new “yes” indicated the column selected. Finally, the therapist followed each symbol of the column until it reached that indicated and confirmed by S., with a last “yes”. This procedure is called scanning.

S. used the indirect pointing resource, through looks due to the fluctuation of tone she presented and because of the reflexes that took the place of voluntary movements she tried to perform. In addition, an insistence on pointing with direct indication would result in global motor disorganization which, due to reflex interference, would cause S. to even come out of the seated position, extending herself, what would require new postural stabilization and a resumption of communication all the time. Hence, the option to point through looks was chosen.

Figure 1 – S.’s communication board with Bliss symbols used in our research



Source: Vasconcellos (1999, p. 84).

⁴⁰ Figure 1 corresponds to the image of one of S.’s boards that are modified according to the needs of the user. The board shown in figure 1 corresponds precisely to the period that our research focuses on.

⁴¹ See Vasconcellos (2010) about the beginning of Bliss symbols introduction to S. in clinical speech therapy. Doctoral thesis, Public Domain.

Results: S.'s productions

Let us turn to some transcribed data from excerpts of Furnari's (1983) book read in the classroom.

Segment I – S. (8 years and 10 months old)

Figure 2 – Text in direct speech in the form of balloon presented to the children



Source: Furnari (1983).

The text read from figure 2 is written in capital letters, as in comic books. The character Gregory says: “Damn! I cannot sleep. I think I’m going to write a letter to the Little Witch”⁴². In the transcript below, T. represents the therapist and S. the child. In capital letters, are the words written by S. that result from her indirect pointing of letters in the alphabet and appear on her board arranged on the table attached to her wheelchair. The words corresponding to the Bliss symbols appear in bold italics. Other children in the room participate in the activity, of which R. is one of the two children who vocalize speech.

- (1) T. S., what is written here?
- (2) S. FARMASA (S. writes FARMASA for drug, instead of *FARMÁCIA* (drugstore or pharmacy))
- (3) R. (Reads) Damn, I can ‘t ...
- (4) T. (Interrupts) S., look at the figure. He can’t...
- (5) S. *sleep*

Figure 2a – *sleep*



Source: BCI (2016).

⁴² Original text: “Droga! Não consigo dormir. Acho que vou escrever uma carta para a bruxinha” (FURNARI, 1983).

- (6) T. Now go on ... And here?
- (7) S. I GUESS (S. writes *AXO* for GUESS, instead of *ACHO*)
- (8) R. (Reads) I will...
- (9) S. *scratch* (there was also the symbol “to write” on her board).

Figure 2b – *scratch*



Source: BCI (2016).

In writing FARMASA in (2) S. reads the writing (the word “drug”) with the writing itself (“farmasa”). The *pharmacy* symbol is not on her board and S. uses the alphabet. The word “drug” seems to summon, metonymically, “pharmacy/drugstore,” but that is not what S. writes. The child writes “farmasa,” incurring in error. It is an error that does not cause strangeness because it is predictable and perfectly explicable through linguistic-discursive functioning and can be read as “pharmacy” in relation to the word “drug” that takes us, metonymically, to “pharmacy”. In “farmasa”, the letter “s” competes with the letter “c” and takes its place. In the last position of the word, only the “a” appears and the “i” of the previous position is deleted.

In (5), from figure 2 and the speech of T., S. indicates the symbol *sleep*, which metonymically completes the therapist’s speech: he cannot ... *sleep*.

In (7), S. reads the writing – *acho* (guess) written as – *axo* –, in a language movement resulting in the substitution of “ch” by “x”.

In (9), S. metonymically complements R.’s reading with the symbol “*scratch*” instead of the symbol “*write*”. Here, the symbol reads the writing and S., probably guided by the drawing and not by the writing accompanying the symbol, makes a mistake.

In any case, it can be said that S. is able to read. This reading is attested by the crosses writing/writing in (2): drug/farmasa and in (5): I guess/*Eu axo*; writing/symbol in (5): sleep/*sleep* and (9): write/*scratch*.

Note that when it is impossible to vocalize speech, Bliss symbols read the writing, because they are articulated with the speech that is in S.’s listening. As it can be seen, alphabetic writing also appears as a possibility to read the writing, even if it results in error.

Segment II – S. (8 years and 10 months old)

p. 190-191).⁴⁴ The difference between the terms, from one text to another, will be defined in their mutual interpretation, according to Borges (2006), including their structural positions.

Borges (2006) wonders about the difference order that drives the units emerging in these new texts. According to the author, “[...] the re-signification of the purely graphic-textual forms of the previous texts by orality seems to be the origin of many changes that occur in the productions interpreted [...]”⁴⁵— productions of subjects from her thesis (MOTA, 1995), which she retrieves in the 2006 book – (BORGES, 2006, p. 192). Thus, Borges (2006) proposes another relationship between orality and writing in contrast to the one that defines the graphic chain units as representations of speech units: the author proposes an “interpretation in which there is a cross between these modalities [oral and written]” (BORGES, 2006, p. 194).⁴⁶

In (3), “U BIRA TAN”, S. writes the name of her father (“Ubiratan”) in a segmented way. The segment “BIRA” results from a cross with orality, since it refers to the way the father is called by all (his nickname is “Bira”). “U” refers to the article “O”, but in this case a cross with orality (“O” versus “U”) and “U”, separated from “Bira” by a blank space, is reinterpreted occupying the article position in the chain that S. writes: “U Bira” in the place of “The Bira”. The “TAN” segment points to a cross between orality and writing: S. refers to her father’s name, as a surname, which she can interpret by way of orality or writing. But “TAN” stands as a remnant, as something that is not part of the way S. listens/interprets her father’s name in orality.

For Borges (2006, p.204) “in a ‘just-after’ moment, under the influence of orality, the re-signification of this initial [segmented] writing emphasizes this also initial segmentation, manifested in the emergence of units in their purely graphical form.” These segmented units “are not cut out by the representations of the subject, but by the language as functioning [...] This clipping is, therefore, not of a perceptual/cognitive order” (BORGES, 2006, p. 204).⁴⁷ According to the author, who cites Abauré (1991), “[...] as an effect of orality intervention, the child delimits an entire tonal group with blanks, as marked by real pauses.” (BORGES, 2006, p. 205).⁴⁸

Segment III – S. (9 years and 4 months old)

⁴⁴ Original text: “A partir dessa repetição ou flexão mútua entre as unidades – palavras, enunciados, textos – ou seja, da insistência na semelhança, emerge a diferença. Semelhanças e diferenças [...] propiciam relações estabilizadoras, definidoras de propriedades, ou classes [...]” (BORGES, 2006, p. 190-191).

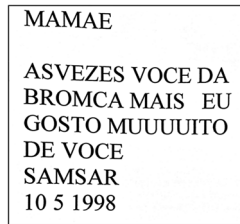
⁴⁵ Original text: “[...] a ressignificação das formas puramente gráfico-textuais dos textos anteriores, pela oralidade, parece-nos estar na origem de muitas transformações que ocorrem nas produções ora interpretadas [...]” (BORGES, 2006, p. 192).

⁴⁶ Original text: “interpretação em que há cruzamento entre essas modalidades [oral e escrita]” (BORGES, 2006, p. 194).

⁴⁷ Original text: “em um ‘só-depois’, sob a interferência da oralidade, a ressignificação dessa escrita inicial [segmentada] recalca esta segmentação, também inicial, que se manifesta na emergência de unidades em sua forma puramente gráfica.” Essas unidades segmentadas “não são recortadas pelas representações do sujeito, mas pela língua como funcionamento [...] Esse recorte não é, portanto, de ordem perceptivo/cognitiva” (BORGES, 2006, p. 204).

⁴⁸ Original text: “[...] como efeito da intervenção da oralidade, a criança delimita com espaços em branco um grupo tonal inteiro, tal como marcado por pausas reais.” (BORGES, 2006, p. 205).

Figure 4 – Mama, sometimes you scold (me) but I like you soooo much



MAMAE
ASVEZES VOCE DA
BROMCA MAIS EU
GOSTO MUUUUITO
DE VOCE
SAMSAR
10 5 1998

Source: S.'s text produced in her personal computer

The text which corresponds to figure 4 above was produced by S. four months after the activity with Eva Furnari's book (1983) ended in the classroom. This text was written by S. on her personal computer, at home.

The reading of that book resulted in many messages written by S. The message of the figure above was addressed to her mother. There is no punctuation or accentuation in it. There are no such marks of writing, but the genre of the message can be recognized by bringing the addressee at the beginning and highlighted in the text and the sender below, also highlighted in the text, as well as the date. There are errors in the text: *asvezes* (sometimes) appears without segmentation (the correct form is *às vezes*) as if it were a single word, corresponding to a single tonal group (BORGES, 2006; ABAURRE, 1991); *bromca* (scolding), in which the nasality is marked by the grapheme “m” and not “n” (the correct form is *bronca*), graphemes that can occupy the same position in the chain because they present the common nasality trait; “mais – more” instead of “mas – but”, a cross with orality, and “samsar” that corresponds to the child's name, spelled wrong here, but after other times in which S. already writes her name correctly, which points to the comings and goings in the acquisition of children's writing and corroborates the thesis that the acquisition of orality and writing are not linear processes (DE LEMOS, 2002; BORGES, 2006).

In this segment, attention is drawn to the presence of *muuuuito* (soooo) that refers to a passage from Furnari's (1983) book:

Figure 5 – Segment that contains the word *muuuuito* (soooo): “I already told you that I think Little Witch is nice? That’s right! I think she is soooo nice!”⁴⁹



Source: Furnari (1983).

Here, the word *muito* (so) is spelled with three “U”s and three “T”s. In S.’s message, *muito* (so) is spelled with four “U”s and one “T”. Once again, we have a repetition with a difference that points to the subjective presence of S. in her writing and, at the same time, to the linguistic functioning in which the word “so” is interpreted from the matrix-text, from the book read and transcribed in class, and comes to occupy a position in another chain, in S.’s text.

Segment IV - S. (9 years and 8 months old)

Figure 6 – Poor Isabela/ because your mother is/ soooo crazy/
when you are born/ I want to meet and play/Samara

<p>ISABELA</p> <p>COITADA DE VOCE POR QUE A SUA MÃE É MUUUUITO MALUCA QUANDO VOCE NASER EU QUERO CONHECE E BRINCAR SAMARA 9-9-1998</p>
--

Source: Text produced in S.’s personal computer

The above text was produced seven months after the end of the activity with Furnari’s book (1983) in the classroom and, like segment III, it was also produced by S. on her personal computer. It is also a message, which can be recognized as such by presenting a recipient (Isabela), whose name is highlighted in the beginning of the text

⁴⁹ Original text: “Eu já disse prá vocês que acho a bruxinha simpática? Pois é! Eu acho ela muuuuito simpática!” (FURNARI, 1983).

in the left margin, and a sender, who also appears highlighted in the text, along with the date it was written on. In S.'s text, the accent of *voce* (you) and punctuation are missing. There is also the presence of some errors: *porque* (because) is exchanged for *por que* (why), an expected change in initial writing; *nascer* is exchanged for *naser* (to be born), in which the grapheme “c” is missing; *conhecer* for *conhece* (to meet), a result of crossing with orality. Again, the word *muito* (so) is spelled as in segment III: with four “U”s and one “I”, unlike the word *muito* (so) that appears in the matrix-text.

The word *muito*, which appears in the matrix-text and is interpreted in S.'s texts, is called “dummy” or “word-theme” in Saussure (1974), as Borges (2006) retrieves. The author discovered, in his study of anagrams, proper or common names in poetry and prose, which he called “word-themes” or “dummies,” whose phonemes were duplicated, repeating themselves throughout the verses. Borges (2006), from Saussure (1974), states that “the text is constructed” on the word-theme, which opens and limits the field of verse possibilities” (BORGES, 2006, p. 177). For Borges (2006), “[...] it seems to be possible to relate the need for restriction regarding repression, with the insistence of what we will call [...], ‘word-theme’ under one’s writing.” (BORGES, 2006, p. 177).⁵⁰ For the pseudo-words of Borges’s subjects’ initial texts in acquiring writing skills to be composed of the “word-theme”, others need to be repressed: there must be an integrated movement between the letters that emerge and those that remain latent.

To explain the emergence mechanism of latent words that may come to the surface, Borges (2006) draws on Freud’s (1973) analogy between the working of memory and the magic block⁵¹. Freud (1973) disregards the analogy of the metaphor of a slate as a surface of inscription that offers itself as a place of writing – of recording – as an auxiliary for the memory, since in this tradition, psychological conceptions that assimilate the memory to a file or to a set of impressions that remain in the memory are aligned. Freud deconstructs these psychological notions of perception and memory and proposes that of “mnemonic trait” through the metaphor of the magic block. Thus, the structures that Borges (2006) observes in the writing of her research subjects, and the structures we observe in S.’s productions that refer to the matrix-texts read in the classroom, “[...] are not mere records, which result from impressions or categorizations, the psychological memory of the units constituted writing. They are, in fact, her

⁵⁰ Original text: “o texto se constrói “sobre a palavra-tema”, que abre e limita o campo de possibilidades do verso” (BORGES, 2006, p. 177). Para Borges (2006), “[...] parece ser possível relacionar a necessidade de restrição que diz respeito ao recalque, com a insistência do que chamaremos [...] sob sua escrita, ‘palavra-tema’.” (BORGES, 2006, p. 177).

⁵¹ In some passages of the text, Borges (2006, p.162, 183, 161) quotes Freud when he alludes to the functioning of the magic block: “If we lift the whole cover – celluloid and waxed paper – [which compose the magic block] of the wax-blade, the writing definitively disappears. But it is not difficult to prove its permanent inscription on the wax sheet [...]” (FREUD, 1973, p. 2809). Or: “If we think that while one hand writes on the surface of the magic block, another periodically removes its cover from the wax tablet, we will have a perceptible illustration of perception in our psychic apparatus.” (FREUD, 1973, p. 2811). And yet, “[The magic block] solves the problem of assembling both faculties [of receiving and maintaining inscription] by dividing them between two elements – distinct systems, however intertwined with each other [...] The surface welcomes the stimuli, but does not preserve them as a permanent inscription, the foundations of our memory are born in a neighboring system.” (FREUD, 1973, p. 2811, translated by Borges).

interpretation of this writing [...] the child has no memories of writing, but about writing.” (BORGES, 2006, p. 131).⁵²

To consider this repetition of *muito* (so) as an effect of the discourses of the Other, represented in the classroom by oral discourses and matrix-texts in their “extracts of memory”, means to recognize, with Freud (1987), that memory is a “language apparatus” and that, as such, is constructed in the relation with another “language apparatus” (BORGES, 2006, p. 147).

Final considerations

The period selected for analysis shows an example of S.’s writing, which reveals the presence of Bliss symbols and alphabetic writing itself operating child’s reading in crossings between symbols/writing and writing/writing. The data indicates that to read the texts, S. makes use of speech-writing, composed of Bliss symbols and alphabetic writing, which points to the interpretation and reading she makes, since she can listen to the other. Her productions indicate the effects of the texts read, which left marks resulting from the functioning of language in a set of mirrors between her texts and the matrix-texts. Traces of the Other’s texts in those of S. revealed a subject in its singularity since these traces migrate to S.’s texts with a difference.

Our analysis also pointed out that the relationship of S. with writing followed a different path from the one which starts with units until the child reaches the text (FERREIRO; TEBEROSKY, 1986), which, according to the teacher, did not seem to work with S. We think that the positive effects found in the introduction of S. to the reading of texts can be attributed mainly to the theoretical approach adopted, which introduced a change concerning the object and the subject: child’s introduction to the linguistic-discursive functioning via texts – different from fragmenting texts into units and from the approach of writing as something to be taught – which favored the capture of S. with regard to writing, allowing the signifiers of the texts to circulate in it, occupying positions in the signifying chains.

Also, the speech vocalization of texts with children certainly contributed positively, favoring the relations between orality and writing in S.’s texts, understood as effects of the systematicity of language and not because of term-to-term correspondence. On S.’s side, there was a subjective change in her relation to writing, which resulted in a profusion of spontaneously written texts, a change that can also be attributed to the nature of the speech therapist’s investment in S.’s writing, who desires the child’s wish, to acquire writing.

⁵² Original text: “[...] não são meros registros, que resultam de impressões sensíveis ou categorizações, memória psicológica das unidades da escrita constituída. São, isto sim, a sua interpretação sobre essa escrita [...] a criança não tem lembranças da escrita, mas sobre a escrita.” (BORGES, 2006, p. 131).

Here, the text was, therefore, the starting point, and the end point. This path allowed us to perceive that there was no symptomatic character in S.'s acquisition of writing who can thus be captured by writing and move in language despite her organic paralysis.

VASCONCELLOS, R. DEL RÉ, A. Paralisia cerebral: efeitos da escrita sobre a escrita. *Alfa*, São Paulo, v.61, n.2, p.405-436, 2017.

- *RESUMO: Buscamos apreender efeitos da leitura de textos na escrita de uma criança, designada como S., impedida de oralizar e escrever de próprio punho por apresentar Paralisia Cerebral. Mediante dificuldades de S. na leitura, relatadas pela professora, uma atividade semanal foi proposta pela fonoaudióloga na sala de aula da escola-clínica que S. frequentava, a partir de livro de Eva Furnari, resultando em uma produção expressiva de textos pela criança. A essas produções somam-se transcrições de filmagens em que esses textos foram lidos, que compõem o corpus alocado no banco de dados do Grupo NALingua-CNPq. Tais dados foram analisados com base em Borges (2006) que propõe a alfabetização de crianças baseada na imersão em leituras de textos diversos. Os resultados apontam para um processo de aquisição da leitura e escrita peculiar, em que cruzamentos entre símbolos/escrita e escrita/escrita operam a leitura da criança. Suas produções trazem efeitos dos textos matriz, lidos em um jogo de espelhos que revelam o funcionamento da língua e, ao mesmo tempo, diferenças: marcas de um sujeito em sua singularidade. Mudanças objetivas e subjetivas na assunção de abordagem teórica diversa da do professor pelo fonoaudiólogo resultaram em mudanças objetivas e subjetivas na relação de S. com a escrita.*
- *PALAVRAS-CHAVE: Paralisia cerebral. Linguagem. Aquisição da escrita. Comunicação alternativa. Símbolos Bliss.*

REFERENCES

ABAURRE, M. B. A relevância dos critérios prosódicos e semânticos na elaboração de hipóteses sobre a segmentação na escrita inicial. *Boletim da Abralín*, Campinas, n. 11, p.203-217, 1991.

ALLOUCH, J. **Letra a Letra**: transcrever, traduzir, transliterar. Tradução de D. D. Estrada. Rio de Janeiro: Companhia de Freud, 1995.

ALVES DE OLIVEIRA, A. I. **Desenvolvimento de aplicativos informatizados para avaliação e ensino de pré-requisitos básicos para aprendizagem de leitura e escrita em crianças com Paralisia Cerebral**. 2008. Projeto de doutorado apresentado ao Programa de Pós-graduação em Teoria e Pesquisa do Comportamento, Universidade Federal do Pará, Belém, 2008.

ANDRADE, L. **Ouvir e escutar na constituição da clínica de linguagem**. 2003. 143 f. Tese (Doutorado em Linguística Aplicada e Estudos da Linguagem) - Pontifícia Universidade Católica de São Paulo, São Paulo, 2003.

ARANTES, A. O fonoaudiólogo, esse aprendiz de feiticeiro. In: LIER-DEVITTO, M. F. (Org). **Fonoaudiologia: no sentido da linguagem**. São Paulo: Cortez, 1994. p. 23-37.

BLISSYMBOLICS COMMUNICATION INTERNATIONAL [BCI]. Available in: <www.blissymbolics.org>. Access on: Oct. 07, 2016.

BORGES, S. **O quebra-cabeça: a alfabetização depois de Lacan**. Goiânia: Ed. da PUC 2006.

CAPOVILLA, F. C. Recursos para educação de crianças com necessidades especiais e articulação entre educação especial e inclusiva. **O Mundo da Saúde**, São Paulo, v. 32, n. 2, p.208-214, abr./jun. 2008. Available in: <http://www.scamilo.edu.br/pdf/mundo_saude/59/208a214.pdf>. Access on: Nov 10, 2016.

CAPOVILLA, A. G. S.; GUTSCHOW, C. R. D.; CAPOVILLA, F. C. Habilidades cognitivas que predizem competência de leitura e escrita. **Psicologia Teoria e Prática**, São Paulo, v. 6, n. 2, p. 13-26, 2004. Available in: <http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1516-36872004000200002&lng=pt&nrm=iso>. Access on: Nov. 10, 2014.

CAPOVILLA, F. C., CAPOVILLA, A. G. S.; MACEDO, E. C. Comunicação alternativa na USP na década 1991-2001: tecnologia e pesquisa em reabilitação, educação e inclusão. **Revista Temas sobre Desenvolvimento**, São Paulo, v. 10, n. 58-59, p. 18-42, set./dez. 2001.

CAVALCANTE, T. C. F. A pessoa com deficiência motora frente ao processo de alfabetização. In: BRASIL. Secretaria de Educação Básica. **Caderno de educação especial: a alfabetização de crianças com deficiência: uma proposta inclusiva**. Brasília: MEC, 2012. p.10-14. Available in: <http://pacto.mec.gov.br/images/pdf/Formacao/Educao_Especial_MIOLO.pdf>. Access on: Nov. 10, 2016.

DE LEMOS, C. T. G. Das vicissitudes da fala da criança e de sua investigação. **Cadernos de Estudos Linguísticos**, Campinas, n. 42, p. 41-69, 2002.

DE LEMOS, C. T. G. Sobre a Aquisição da Escrita: algumas questões. In: ROJO, R. H. (Org.). **Alfabetização e letramento**. Campinas: Mercado de Letras, 1998. p. 7-17.

DE LEMOS, C. T. G. Língua e discurso na teorização sobre aquisição da linguagem. **Letras de Hoje**, Porto Alegre, v. 30, n. 4, p. 9-28, 1995.

DE LEMOS, C. T. G. Los procesos metafóricos y metonímicos como mecanismos de cambio. **Substratum**, Barcelona, v. 1, n. 1, p. 121-135, 1992.

DERRIDA, J. **Gramatologia** (*de la Grammatologie*). Translated by Perspectiva, Ed. São Paulo: Perspectiva, 1973.

FERNANDES, A. S. A comunicação alternativa na escola especial. **Temas sobre Desenvolvimento**, São Paulo, v. 10, n. 58-59, p. 85-88, set./dez. 2001.

FERREIRO, E.; TEBEROSKY, A. **Psicogênese da língua escrita**. Tradução de Diana Myriam Lichtenstein et al. Porto Alegre: Artes Médicas, 1986.

FINNIE, N. A. **O manuseio em casa da criança com paralisia cerebral**. Tradução de Julio Pinto Duarte. 2.ed. São Paulo: Ed. Manole, 1980.

FREIRE, F. M. P. **Educação especial e recursos da informática**: superando antigas dicotomias. Biblioteca Virtual, Textos, PROINFO/MEC, 2002. Available in: <www.proinfo.gov.br/upload/biblioteca/197.pdf>. Access on: Nov. 10, 2016.

FREUD, S. **Contribution à la conception des aphasie, une étude critique**. Tradução de francesa de Zur Auffassung der Aphasien, eine kritische studie. Paris: Presses Universitaires de France, 1987.

FREUD, S. La interpretación de los sueños. Tradução de Die Traumdeutung. In: FREUD, S. **Obras completas**. 3. ed. Madrid: Biblioteca Nueva, 1973. p. 2809-2811.

FURNARI, E. **A bruxinha encantadora e seu secreto admirador, Gregório**. São Paulo: Edições Paulinas, 1983. Não paginado.

HEIDRICH, R. et al. Design centrado no usuário para objetos de aprendizagem inclusivos. In: SIMPÓSIO BRASILEIRO DE INFORMÁTICA NA EDUCAÇÃO, 21., 2010. **Anais...** Porto Alegre: SBIE, 2010. p.01-07. Available in: <<http://br-ie.org/pub/index.php/sbie/article/view/1508/1273>>. Access on: Nov. 10, 2016.

HEIDRICH, R. O.; SANTAROSA, L. C.; FRANCO, S. K. Inclusão escolar de aluno com paralisia cerebral, utilizando as tecnologias de informação e comunicação. **Revista Ibero-Americana de Educación**, Madrid, v. 60, n.2, p.01-11, 2012. Available in: <http://rieoei.org/rie_contenedor.php?numero=4510&titulo=Inclus%C3%A3o%20escolar%20de%20aluno%20com%20paralisia%20cerebral,%20utilizando%20as%20tecnologias%20de%20informa%C3%A7%C3%A3o%20e%20comunica%C3%A7%C3%A3o>. Access on: Nov. 10, 2016.

HOFFMANN, R.; TAFNER, M. A.; FISCHER, J. Paralisia cerebral e aprendizagem: um estudo de caso inserido no ensino regular. **Revista do Instituto Catarinense de Pós-Graduação**, Blumenau, n.2, jan./jun. 2003. Available in: <<http://www.posuniasselvi.com.br/artigos/rev02-12.pdf>>. Access on: Nov. 10, 2016.

JAKOBSON, R. **Linguística e comunicação**. Tradução de Izidoro Blikstein e José Paulo Paes. São Paulo: Cultrix, 1969.

JOHNSON, S. S. et al. Teaching sound letter correspondence and consonant-vowel-consonant combinations to young children who use augmentative and alternative communication. **Augmentative and Alternative Communication**, [S.l.], v. 25, n. 2, p. 123-135, 2009.

JORDAN, M.; NOHAMA, P.; BRITTO JÚNIOR, A. S. Software livre de produção textual com predição de palavras: um aliado do aluno especial. **Revista Brasileira de Educação Especial**, Marília, v. 15, n. 3, p. 389-406, 2009. Available in: <<http://www.scielo.br/pdf/rbee/v15n3/a04v15n3.pdf>>. Access on: Nov. 10, 2016.

LACAN, J. A instância da letra no inconsciente ou a razão desde Freud. In: LACAN, J. **Escritos**. Tradução de Vera Ribeiro. Rio de Janeiro: Zahar, 1998. p. 496-533.

LACAN, J. **L'éthique de la psychanalyse**. Texto estabelecido por Jacques-Alain Miller. 2.ed. Rio de Janeiro: Jorge Zahar, 1991. (Le Séminaire; v.VII).

LACAN, J. **O seminário, livro I: os escritos técnicos de Freud**. Texto estabelecido por Jacques-Alain Miller. 3. ed. Rio de Janeiro: Jorge Zahar, 1986. (Le Séminaire de Jacques Lacan; Livre I: les écrits dans les techniques de Freud (1963-1975)).

LIER-DEVITTO, M. F. Sobre as vicissitudes de falas sintomáticas. In: LIER-DEVITTO, M. F.; ARANTES L. (Org.). **Aquisição, patologias e clínica de linguagem**. São Paulo: EDUC, 2006. p. 79-96.

LIER-DEVITTO, M. F. Patologias da linguagem: subversão posta em ato. In: LEITE, N. V. A. (Org.). **Corpolinguagem: gestos e afetos**. Campinas: Mercado de Letras, 2003. p.233-245.

LIER-DEVITTO, M. F. **Os monólogos da criança: delírios da língua**. São Paulo: EDUC, 1998.

LIER-DEVITTO, M. F. Sobre a interpretação. **Cadernos de Estudos Linguísticos**, Campinas, v. 29, p. 9-15, 1996.

LIER-DEVITTO, M. F.; ARANTES, L. Sobre os efeitos da fala da criança: da heterogeneidade desses efeitos. **Letras de Hoje**, Porto Alegre, v.33, n. 2, p. 65-72, 1998.

MILLAR, D. C.; LIGHT, J. C.; Mc NAUGHTON, D. B. The effect of direct instructions and writer's workshop on the early writing skills of children who use augmentative and alternative communication. **Augmentative and Alternative Communication**, [S.l.], n. 20, p. 164-178, 2004.

MILNER, J. C. **O amor da língua**. Tradução de Angela Cristina Jesuino. Porto Alegre: Artes Médicas, 1987.

MONTEIRO, C. B. M. **Paralisia cerebral: identificação do modelo de controle motor de seis abordagens de tratamento**. 2001. 150f. Dissertação (Mestrado em Distúrbios do Desenvolvimento) - Universidade Presbiteriana Mackenzie, São Paulo, 2001.

MOTA, S. B. V. **O quebra-cabeça da escrita**: a instância da letra na aquisição da escrita. 1995. 271f. Tese (Doutorado em Linguística Aplicada e Estudos da Linguagem) - Pontifícia Universidade Católica de São Paulo, São Paulo, 1995.

NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE [NINDS]. Cerebral palsy: hope through research. **National Institutes of Health**, n. 06-159, 2006. Available in: <<https://www.ninds.nih.gov/Disorders/all-disorders>>. Access on: Nov. 10, 2015.

OLIVEIRA, A. I. A.; ASSIS, G. J. A.; GAROTTI, M. F. Tecnologias no ensino de crianças com paralisia cerebral. **Revista Brasileira de Educação Especial**, Marília, v. 20, n. 1, p.85-102, jan./mar. 2014. Available in: <<http://www.scielo.br/pdf/rbee/v20n1/a07v20n1.pdf>>. Access on: Nov. 10, 2016.

OLIVEIRA, A. I. A.; GAROTTI, M. F.; SÁ, N. M. C. M. Tecnologia de ensino e tecnologia assistiva no ensino de crianças com paralisia cerebral. **Revista Ciência e Cognição**, Rio de Janeiro, v. 13, n. 3, p. 243-268, dez. 2008.

PAUL, R. Facilitating transitions in language development for children using AAC. **Augmentative and Alternative Communication**, [S.l.], v. 3, n. 13, p. 141-148, 1997.

PIAGET, J. **A linguagem e o pensamento na criança**. Tradução de Manuel Campos. São Paulo: Martins Fontes, 1986.

RODRIGUES, V.; MEDEIROS, J. G. Utilização da discriminação condicional no ensino da literatura e escrita a crianças com paralisia cerebral. **Estudos de Psicologia**, Campinas, v. 3, n. 1, p.55-73, 2001.

SANDBERG, A. D.; HJELMQUIST, E. Phonologic awareness and literacy abilities in non-speaking preschool children with cerebral palsy. **Augmentative and Alternative Communication**, [S.l.], n. 12, p. 138-153, 1996.

SAUSSURE, F. **Curso de linguística geral**. Tradução de Antônio Chelini, José Paulo Paes e Izidoro Blikstein. 6.ed. São Paulo: Cultrix, 1974.

SAUSSURE, F. **Cours de linguistique générale**. Édition critique préparée par Tullio de Mauro. Paris: Payot, 1972.

SEABRA, A. G. Alfabetização, distúrbios de fala e comunicação alternativa: características e instrumentos para avaliação e intervenção. In: DELIBERATO, D. et al. (Org.). **Comunicação alternativa**: teoria, prática, tecnologias e pesquisa. São Paulo: Memnon, 2009. p. 216-225.

TEBEROSKY, A.; COLOMER, T.; MOLL, J. **Aprender a ler e escrever**: uma proposta construtivista. Porto Alegre: Artmed, 2003.

TETZCHNER, S.; JENSEN, M. H. Introduction. In: TETZCHNER, S.; JENSEN, M. H. (Org.). **Augmentative and alternative communication: european perspectives**. 2. ed. Londres: Whurr Publishers, 1997. p. 1-19.

TETZCHNER, S.; MARTINSEN, H. Augmentative and alternative communication. In: TETZCHNER, S.; MARTINSEN, H. (Org.). **Introduction to sign teaching and the use of communication aids**. 2. ed. Londres: Whurr Publishers, 1992. p. 6-26.

TOLEDO, V. L. M.; ROGATO, S. B. R. **Intervenção pedagógica através dos jogos tecnológicos para o processo de alfabetização dos alunos com paralisia cerebral na educação infantil**. Curitiba: Secretaria de Educação, 2010. Available in: <http://www.diaadiaeducacao.pr.gov.br/portals/cadernospde/pdebusca/producoes_pde/2010/2010_uenp_edespecial_artigo_vera_lucia_manfre_de_toledo.pdf>. Access on: Nov. 10, 2016.

VASCONCELLOS, R. Habla, escucha, escritura: la relación sujeto-lenguaje en el caso de um niño con parálisis cerebral que no oraliza. In: BARDONE, L.; SANCEVICH, I. (Org.). **Adquisición, patología e clínica del lenguaje**. Rosario: UNR, 2014. p. 359-386.

VASCONCELLOS, R. **Organismo e sujeito: uma diferença sensível nas paralisias cerebrais**. 2010. 130f. Tese (Doutorado em Linguística Aplicada e Estudos da Linguagem) - Pontifícia Universidade Católica de São Paulo, São Paulo, 2010.

VASCONCELLOS, R. Fala, escuta e escrita nas produções de uma criança com paralisia cerebral. In: LIER-DEVITTO, M. F.; ARANTES, L. (Org.). **Aquisição, patologias e clínica de linguagem**. São Paulo: EDUC/FAPESP, 2006. p. 289-311.

VASCONCELLOS, R. **Paralisia cerebral: a fala na escrita**. 1999. 128f. Dissertação (Mestrado em Linguística Aplicada e Estudos da Linguagem) - Pontifícia Universidade Católica de São Paulo, São Paulo, 1999.

VYGOTSKY, L. S. **Psicologia pedagógica**. Porto Alegre: Artes Médicas, 2000.

Received in may 2016

Approved in December 2016