

Children diagnosed with Irlen Syndrome: analysis of written productions

Crianças diagnosticadas com Síndrome de Irlen: análise de produções escritas

Niños diagnosticados con síndrome de Irlen: análisis de producciones escritas

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Abstract

The objective of this study was to analyze different texts produced by a 10-year-old male individual diagnosed with Irlen Syndrome (IS). This is a case report; a socio-historical qualitative study. The analysis focused on the discursive and notational aspects of the production of four different writing genres: a letter (to an idol, a family member, or a friend), the rules of a game, a children's story, and a poster. Regarding the discursive aspects, the participant was able to adequately operate the various aspects that characterize the production of the required genres, showing relevance concerning the proposed themes, objectives, and context flow. As for the notational aspects, the subject presented hypotheses and strategies that were distant from the orthographic pattern of the target language, such as changes, omissions, increase of letters and undue segmentation. The results show that children diagnosed with IS may have unique strategies, inherent to the appropriation process of written language. Based on the analysis, it is suggested that studies on IS are conducted, so that they may offer elements for health and education professionals involved with these individuals in their clinical and school practices to conduct their jobs prioritizing the processes and different dimensions involved with the appropriation of reading and writing skills.

Keywords: *Language; Speech Language and Hearing Sciences; Syndrome.*

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Resumo

Este estudo objetiva analisar textos produzidos por um sujeito de 10 anos de idade, do sexo masculino, diagnosticado com Síndrome de Irlen (SI). Trata-se de um relato de um estudo de caso, pesquisa qualitativa, de cunho sócio-histórico. Priorizou-se a análise de aspectos discursivos e notacionais das produções escritas, relacionadas a quatro gêneros discursivos: uma carta (para um ídolo, para um familiar ou para um amigo), regras de um jogo, um conto infantil e um cartaz. Em relação aos aspectos discursivos, o participante da pesquisa conseguiu operar sobre vários aspectos que caracterizam as condições de produção dos gêneros requeridos, evidenciando pertinência em relação às temáticas propostas, à finalidade e ao contexto de circulação do texto. Quanto aos aspectos notacionais, o sujeito apresentou estratégias e hipóteses distantes do padrão ortográfico da língua, tais como: trocas, omissões e acréscimo de letras e segmentação indevida. Os resultados evidenciam que crianças com esse diagnóstico podem apresentar estratégias singulares em suas produções, inerentes ao processo de apropriação da linguagem escrita. Diante da análise realizada, sugere-se o implemento de estudos acerca da referida síndrome que ofereçam elementos para que profissionais da saúde e educação, envolvidos com sujeitos acometidos pela mesma, possam em suas práticas clínicas e escolares desenvolver um trabalho que priorize os processos e as diferentes dimensões envolvidas com a apropriação da leitura e da escrita.

Palavras-chave: Linguagem; Fonoaudiologia; Síndrome

Resumen

Este estudio tiene por objetivo analizar producciones escritas por un sujeto de 10 años de edad, de sexo masculino, diagnosticado con el Síndrome de Irlen (SI). Se trata un estudio de caso, investigación cualitativa, de carácter socio-histórico. Se ha priorizado el análisis de los aspectos discursivos y notacionales de las producciones escritas relacionadas con cuatro géneros discursivos: Una carta (a su ídolo, a un miembro de la familia o a un amigo), reglas de un juego, un cuento infantil y un póster. En cuanto a los aspectos discursivos, el participante de la investigación consiguió operar bajo diversos aspectos que caracterizan las condiciones de producción de los géneros requeridos, evidenciando pertinencia para los temas propuestos, la finalidad y el contexto de circulación del texto. En cuanto a los aspectos notacionales, el sujeto presentó estrategias y hipótesis distantes de la ortografía estandarizada, tales como: cambios, omisiones y adición de letras y segmentación inadecuada. Los resultados indican que los niños con este diagnóstico pueden desarrollar estrategias únicas en sus producciones, inherentes al proceso de apropiación de la lengua escrita. Ante el análisis realizado, se sugiere el implemento de estudios acerca del síndrome que ofrezcan elementos con los cuales profesionales de la salud y educación, involucrados con los individuos afectados, puedan en sus prácticas clínicas y escolares desarrollar un trabajo que da prioridad a los procesos y a las diferentes dimensiones relacionadas con la apropiación de la lectura y escritura.

Palabras clave: Lenguaje; Fonoaudiología; Síndrome

Introduction

Studies have pointed out an increase in referrals of children with problems in reading and writing for speech-language therapy assessment usually held by their educators¹⁻³.

Such referrals essentially occur due to the fact that these children cannot keep up with the school expectations regarding their learning of the normative aspects of the Portuguese language,

mainly for presenting non-standardized spelling expressions^{2,4}.

Such recurrently formulated referrals, suggesting that those manifestations are associated with children's inherent disabilities and/or organic ones, justifying their poor school performance, have usually been confirmed. It is important to point out that by means of language-speech therapeutic assessment, centered in organic, functional and/or perceptual aspects related to hearing, vision or motor coordination, such children have been diag-

nosed as suffering from disabilities and/or disorders in reading and writing^{2,4,5}.

From that point of view, written productions out of the normative pattern of the Portuguese language, elaborated by subjects who are in the process of appropriation of reading and writing, have been assumed as evidences of disorders related to codification and decodification skills of this kind of language. Spelling productions presenting changes, omissions, letter addition or undue segmentations are traditionally associated with diagnoses such as dyslexia, misspelling; learning disorder, attention deficit; hyperactivity^{2,6}, difficulty in reading and writing and, more recently, Irlen Syndrome.

Under other perspectives, which try to integrate organic and perceptual aspects involved with reading and writing^{7,8} to the other dimensions comprising the process of appropriation and use of this type of language, studies grounded in a socio-historical language conception^{9,10} provide elements which enable to understand how those supposed complaints and diagnoses are determined by several factors^{7,8}.

Those studies assume that mastering reading and writing implies to appropriate the alphabetical system of the Portuguese language (notational aspects), as well as the discursive dimensions entailing such practice, which refer to the conditions for producing written texts, that is, who is being written to, what the objective is, what is being written about¹⁰.

In light of that assumption, it can be understood that the conditions of reading and writing by the subjects are pivotally associated with the experiences, values and uses that they establish with this type of language along their lives, within different contexts, and from different social relationships^{7,9,10}.

As for the processes of teaching-learning the written Portuguese language, it is still considered that non-standardized written productions are mostly the result of not properly developed skills in the educational context. Brazilian children, along their school years, barely produce, review, rewrite and share texts. Thus, such children are not placed in the position of recipients of their own written production or their peers', which narrows their possibilities of analyzing the criteria that rule over the alphabetical system of the Portuguese language^{7,9,10}.

Evidencing the aforementioned fact, studies^{8,9,11,12} point out how written activities, experienced by children in the school context, primarily aim

at evaluating the ability of codification, therefore they are being used to identify and measure the so-called spelling mistakes. Being submitted to written practice, merely as a way to evaluate school performance, children tend to establish a restricted, mostly unpleasant relationship with this type of language, which hinders the fully development of their reading and writing competencies. Due to that situation, it can be verified that older children are still in the initial stage of appropriation of the language notational aspects^{11,12}.

In order to face this problem, it stands out the need of critical analysis of the classification of clinical conditions, established by means of assessment procedures, which are grounded in the understanding that subjects' writing and reading deficits are correlated with organic and functional disorders, such as the Irlen Syndrome, object of our study.

That syndrome, described by advocates of perspectives which prioritize organic and functional aspects, is associated with a visual disorder not straight correlated with the visual system (eyes), but with changes in the coding and decoding of the visual information by the central nervous system due to a disorder in the capacity of adapting to light^{13,14}. Therefore, it is a visual processing disorder, hindering the integrity of the peripheral vision.

The main symptoms described, which feature the so-called IS, are sensitivity to clarity and brightness, difficulty in reading written texts on white paper, difficulty in keeping the focus during reading, and change in the concomitant perception and elaboration of clusters of letters, numbers or words¹². In a clinical view, grounded in the cause-and-effect logicism, such difficulties impair reading, hindering the access and learning of the written language, generating writing-related symptoms, mainly in the graphic and orthographic aspects of the language^{13,14}.

In light of those considerations, this research study aims to analyze the written production of a child diagnosed with IS, essentially focusing on two aspects which constitute the written language, that is, discursive and notational ones.

Presenting the Clinical Case

This qualitative study was approved by the Ethics Board on Research, opinion n. 071.546/2014. Field research was held at Universidade Tuiuti do

Paraná, after the participating child's legal guardians signed the Free Informed Consent Form. From now on, the child will be identified by the initials CA. Diagnosed with Irlen Syndrome, CA is a male child, who was 10 years old at the time of the field research, and was attending the second grade of elementary school. *CA's family comprises his father, mother and a brother. His father is a driver, complete middle school; his mother is a housewife who graduated from High School.*

After failing twice in that grade, CA was referred to a neurologist by his school professionals for a clinical screening with the complaint of showing problems or disorders, which hinder his learning of reading and writing. After screening, CA was diagnosed with attention deficit and referred to an educational psychologist who diagnosed him as suffering from Irlen Syndrome.

It should be pointed out that CA's written productions, object of our analysis, were carried out during four meetings with the researcher, once a week, for 50 minutes each. In those meetings, CA was supposed to produce texts from four distinct discursive genres. CA could choose the thematic; the recipients; the text organization and structuring, and the normative and notational aspects. Therefore, the child was proposed to write:

- A letter to an idol, a family member or a friend (Text 1). In this case, the child was invited to choose an addressee as well as the theme of the letter to be written and, later, mailed;
- The rules of a game (Text 2). Firstly, several games were presented to the child and he was requested to select one of them in order to play it with the researcher. Afterwards, he was suggested to write its rules so that it would be shared by others;
- A children's story (Text 3). The child was proposed to select one of the books available, to read it, and later to retextualize it in writing. He was informed that his production would be read by other children;
- A message (Text 4) to be attached on the board of the speech language therapy clinic where the participant was being treated. He was told that the text aimed to inform the other attendees about the rules of that facility.

It is worth mentioning that CA promptly accepted to carry out the productions proposed by the researcher, and did not request any help while

working on them. After these considerations, his productions are as follows:

Text 1 – Letter to an idol. (Literal translation)

To Neymar

1. Eu gosto de foce e foce aitar (I like you and you're going to be)
2. na copa do mando de 2014 meu mone (in the World Cup of 2014... my name)
3. e Pedro eu moro em maringa eu (is Pedro, and I live in Maringá, I)
4. gosto de futibon eu quero (like soccer I want)
5. que voce vaca moitos gols (you to score many goals)
6. na copa do mando (in the World Cup)

Text 2 – Rules of a game (Literal translation of his production)

1. regras o bigetivo do jogo e ficar (rules: the objective of the game is to get)
2. com mais numeos de carta os (the greatest number of cards)
3. jogadores tei que tar três (the players have to give three)
4. carta para os goga do res um (cards for the players)
5. por us vai baten as cartinha ci (to hit the card, if)
6. a carta vira e cua vece o jogo (the card turns over, the winner of the game)
7. que ficar com mais carta (will be the one with the greatest number of cards)

Text 3 – Tell a story

The ugly duckling

1. o patinho feio ele naceu braço (The ugly duckling was born white)
2. e a mãe voi mostra para os ceus (His mother is going to show him to her)
3. vicichos e todo mondo falou que (neighbors, and everybody said)
4. patinho mais feio a mãe mendo o (What an ugly duckling!! His mother sent)
5. patinho feio inbora e o pe a mãe (the ugly duckling away, then his mother)
6. siarepen deu e o patinho feio (regretted that and the ugly duckling)
7. para casa. Depois dece tia a mãe co ('came back' home. From then on, his)
8. mecou atrata bem do patinho. (mother started to treat the ugly duckling well)

Text 4- (Message to attach on the board of the clinic reception)

Trente a tencen (Pay attention)

1. Kriansas não pode coren (Children can't run)

2. coretro ei na cala de espera (in the hall of the waiting room)
3. não pote fica bateno um nu outro (They can't hit each other)
4. não pote abrinno porton ces pai (They can't open the door without their father)
5. ci mãi não pode jogar licho no (or mother, they can't throw litter on the)
6. çon (floor)

Considering the objectives of this study, it should be mentioned that two aspects which entail the written language were primarily focused:

- The discursive ones, among them, it was considered how the child works on the production conditions involved in the texts, that is, which the recipients are; what the child has to tell them; what the goal of the child's production is; the thematic pertinence; the circulation contexts that surround the productions. The adequacy to the proposed discursive genre was also considered.
- The notational ones, being considered the graphic and orthographic aspects. Thus, CA's productions meet the criteria ruling over the alphabetic system of the Portuguese language, mainly the ones related to: direction, linearity, horizontalness, segmentation and spelling.

In Text 1, a letter to an idol, CA explicits the name of the addressee in the letterhead: "To Neymar." It can be observed that enunciative mechanisms were used, considering feelings and information about his addressee: "I like you", "You're going to be in the World Cup". It is worth mentioning that the choice of his idol was possibly surrounded by the historic, lived context. The letter was written before, but close to the World Cup of 2014, held in Brazil. In that moment, Neymar was pointed to the mass media as one of the best players in the world. Produced and broadly released discourses would place Neymar as an idol, and expected a good performance from the national soccer team.

According to the features of the written genre used, and considering the fact that CA was unknown by his addressee, it should be pointed out that the boy introduced himself to his idol, "My name is [CA], I live in Maringá". Subsequently, he writes, "I like soccer", explaining the reason for his choice. He ends his production with a wish, "I want you to score many goals." Therefore, the text unveils that CA fulfilled his goal to write to a determined addressee, thus he used a set of discursive, formal

text strategies, which represent a unit of meaning and concrete enunciation^{9,11,12}.

Text 2, the rules of a game, in turn, reveals that CA was able to list the rules of the game of "turning over cards". CA starts the text explaining that "the objective of the game is to get the greatest number of cards", making the reader aware that the rounds of the game would aim to get as many cards as possible. Subsequently, he clarifies that each player keeps three cards and "one by one will hit the card". It is also noticed that CA understands the dialogical aspects involved in the text production when he addresses the reader: "you will keep the card if you turn it over". At the end of his explanation, he stresses the initial information that "the winner will be the one who can get the most cards." Therefore, his text enables to understand the rules of the game, as CA describes all the necessary steps for the reader's understanding.

As for Text 3, a children's story, CA chose the famous story of "The Ugly Duckling" to retextualize it. Thus, he starts his written production by saying that "The ugly duckling was born white." By stating it, he changes the original version of the story, which says that the ugly duckling was dark (grey). Actually, the duckling was a swan, and little swans are usually greyish, with dark beaks and feet. However, as they grow older, they turn white. Therefore, we can consider that knowing the duckling's real nature (he was actually a swan), CA represents the duckling in his adult form (white), that is, the best known one.

It is highlighted that the central issue of the story is the fact that as the bird is different from the others, it is considered "ugly-looking." CA omitted the information that many ducklings had been born, and one of them was different from the others. Such an omission can be related to the fact that this story is a famous one, which makes his writing addressed to a reader who supposedly knows the story.

It is interesting to observe that CA conveys that mother duck did not consider her duckling ugly at first, but "she showed him to her neighbors", and "everybody said that he was ugly-looking." It can be understood by reading what he wrote that the neighbors' opinion made mother duck consider the duckling ugly and rejected him ("sent the ugly duckling away", he wrote).

The development of the written production enables to realize that it is not a mere reproduction

of the original story, but it is a re-enunciation, occurring from significant changes. In the original story, the duckling goes away, and ends up meeting a swan family (his peers) when he realizes he is a swan himself; in CA's version, mother duck regrets to have rejected him, and the **duckling** returns home when his mother decides "to treat him well." In this production, it is evident the way that CA uses his feelings, his wishes and cognitive skills, and actively performs the reconstruction of somebody's words, making them his own words in an authoring exercise^{1,9,11}.

About the poster, CA starts it with an impacting title "Pay attention", calling the reader's attention to the rules of the clinic. From this initial warning, CA enumerates, in separate lines, the rules to be followed, one by one: "children must not run," "you must not hit each other," "you must not open the door." It should be pointed out that these written sentences follow the enunciation purpose, therefore they are inserted in a contextualized situation. It is clear that the production conditions and the intended message of Text 4 were considered by CA, which unfolds his knowledge about the situational use of the written language.

From the texts presented above, it is evident that CA not only reproduces previously written sentences and preconceived ideas, but he takes their authorship. Such a position, due to several kinds of knowledge (interactive, linguistic and socio-cognitive ones) reveals the subject's interactive participation in the process of writing appropriation, as he produces enunciations taking the interactive social status as reference.^{9,12}

Regarding notational aspects, in all his productions, CA elaborated assumptions and knowledge on the principles that rule over the alphabetical system of the Portuguese language, which resulted in the production of words complying with the spelling rules or not. In the latter case, it can be observed that he grounds his spelling in the oral language, resulting in the following processes: undue segmentations, letter changes related to voiced and unvoiced phonemes and cross relations^{10,11,12}.

The formulated assumptions grounded in the oral language led CA to use undue segmentations in his productions, as he used either hyposegmented words: "aitar", for "vai estar" – "is going to be" – (Text 1, line 1), or hypersegmented ones: "goga do res", for "jogadores" – "players" (Text 2, line 4).

CA also changed phoneme-related letters, the so-called minimal pairs¹⁵. Thus, we can notice his spelling of "foce", for "você" – "you" (Text 1, line 1), "vaca", for "faça" – "do it" – (Text 1, line 5), "tar", instead of "dar" – "give" (Text 2, line 3), "voi", for "foi" – "went" – (Text 3, line 2), "pote", for "pode" (must) (Text 4, line 4).

Continuing with the discussion of the spelling assumptions found in CA's productions, letter changes and omissions can still be observed, as in the following examples: "mando" for "mundo" – "world" (Text 1, line 2), "mome", for "nome" – "name" – (Text 1, line 2), "futebon", for "futebol" – "football or soccer" (Text 1, line 4), "numeos", for "números" – "numbers" (Text 2, line 2), "braco" for "branco" – "white" – (Text 3, line 1), "mondo" for "mundo" – "world" (Text 4, line 3), "coren", for "correr" – "run" (Text 4, line 1).

It can be observed that CA spells the word "mundo" ("world") in two distinct ways: "mando" (Text 1, line 2), "mondo" for "mundo" (Text 3, line 3). Thus, it is evident that he is making assumptions on how nasal sounds can be spelled in the middle of words; assumptions also apprehended in the spelling of the word "braco", for "branco" – "white." Such spelling changes and omissions performed by CA enable to apprehend his active participation in the process of writing construction, as they unfold linguistic actions under way^{10,11,12}.

Other hypotheses performed by CA point to the fact that he is working on writing as an object of knowledge being constructed, as well as unveiling organizing criteria of the alphabetic system in the Portuguese language, among them, the so-called cross relations. Such relations occur when different letters can be used to graphically represent the same sound, bringing about spelling doubts in the children during their process of appropriation of the written language¹⁰.

About those relations, it stands out the spelling "gous" for "gols" – "goals" – (Text 1, line 5), "ci" for "si" – "if" – (Text 2, line 5), "céus" para "seus" – "your" – (Text 3, line 2), "vicinhos" para "vizinhos" – "neighbors" – (Text 3, line 3), "Krianças" for "crianças" – "children" – (Text 4, line 1), "cala" for "sala" – "room" – (Text 4, line 2), and "licho" for "lixo" – "litter" (Text 4, line 5).

Such spelling occurrences can be explained by the way Portuguese language works. Spelling "cala" instead of "sala", for example, is explained because the phoneme /s/ in Portuguese can be re-

presented by several graphemes, such as s, ss, sc, c, ç, sç, leading to multiple possibilities. That is a processing use, part of the implied instabilities to get appropriated of the normative writing system. Based on the oral language, the child chooses a possible grapheme, which may not be normatively used^{10,11}.

Discussion

From CA's production analysis, founded in the socio-historic perspective^{9,10}, it was possible to verify that CA reasoned correctly on the discursive aspects, as such productions are pertinent with the theme, the objective, the readers and the context of the discursive genre^{1, 9,11}. It can be highlighted that the production of a discursive genre implies reasoning and analysis on its linguistic-discursive properties and on its production conditions (who the text will be addressed to, what will be written, how it will be written and what its objective is)^{1,9,11}.

Motivated by the aspects that underpin the conditions of text production, CA wrote four texts, which enable the reader to understand the conveyed meanings. Thus, CA uses a set of linguistic and cognitive knowledge (related to a letter to an idol; the rules of a game; a children's story; a poster), discursive aspect, focus and thematic progression, which evidence his skills while writing student and author^{1,7, 8}.

As for CA's spelling manifestations, complying or not with the norm, it can be stated that he visually recognizes the graphic form of all the letters of the alphabet, being able to write them properly and clearly.

It should be pointed that CA not only recognizes the graphic form of the letters of the alphabet, but he also unveils visual knowledge of the space and the graphic aspects of the Portuguese language in his productions. Therefore, CA meets the criteria of direction, linearity, horizontalness and segmentation of that system, once he wrote from left to right; from upwards to downwards, horizontally and spacing between letters and words.

It can also be highlighted that CA elaborated the text lay out in a proper way. He made choices in order to occupy the sheet space, stressing the titles, either by centralizing them or exploring the letter size, distributing the sentences in different lines when he wrote the poster and the rules.

It is still worth mentioning that CA spaced the letters, the words and sentences adequately, following the lines, and not going beyond the limits of the sheet margins.

From the analysis on the notational aspects produced by CA, that is, graphic and orthographic aspects of the writing, it can be considered that he does not have any symptoms of a reading or writing disorder, mainly the ones related to IS. Although he was diagnosed with IS, it was evidenced, in CA's written productions, procedural and typical traits from a writing learner.

It should be clarified that the assumptions presented by CA are considered part of the spelling appropriation process, therefore they are predictable, and point to an active stance that he took during the writing practice^{10,12}.

Spelling manifestations and non-standardized word segmentations are considered predictable events during the writing appropriation process. In the first case, this occurs because the learner tries to establish a one-to-one relationship between sound and letter, and in the second case, because he segments writing grounded in prosodic speaking hints^{8,9,10, 12}.

Either by the cross relations between phonemes and letters (a single phoneme can be represented by different letters, or a letter can be associated with different phonemes), or by the fact that the learner relies on the way of articulating phonemes whose sound is slightly distinct (minimal pairs /p/ and /b/, /f/ and /v/, /k/ and /g/), non-standardized spelling manifestations unveil linguistic and cognitive knowledge under construction^{3,10,12}.

However, it is important to point out that these minimal-pair-related exchanges, present in CA's productions, tend to occur due to the fact that children are oriented to write silently, which makes them perform only the articulatory movements related to the phonemes, being in the case of the pairs, quite similar. In those cases, when children tend to articulate the words without pronouncing them loudly or by whispering them, misspelling, involving sound similarity, may occur^{3,10}.

It should still be pointed that undue segmentations signal to the perception that there are units in writing, such as articles, prepositions, conjunctions, etc. Therefore, by writing, for example, "a tencen" (atenção - attention); "goga do res" (jogadores - players); "com migo" (comigo - with me) reveals the knowledge of the existence of these

elements in writing. The learner reflects on how writing works, viewing it as an idiosyncratic type of language^{10,11,12}.

Based on the theoretical perspective adopted in this study, as well as on the analysis of CA's productions, it is understood that writing appropriation is a process which implies "comings and goings", featuring the knowledge or not of the spelling rules. In this non-linear, non-cumulative process, the subject has active participation, performing associations, choices and decision making^{10,12}.

However, CA's writing skills were considered behind of what would be "expected" for his age, therefore he was referred to and included in the therapeutic process.

In this context, it is necessary to keep in mind that a ten-year-old child, who features linguistic and cognitive skills, the case of CA, is able to overcome the "initial stage" of appropriation of the notational aspects of the language after attending school for 5 years.

However, it is understood, as mentioned above, that spelling "difficulties" - educators' main concern - can only be overcome by practicing reading and writing. However, considering the actual situation of Brazilian educational system, where students hardly read and write, it is possible to understand why a significant number of students has been forwarded to health care clinics. By means of such referrals, it aims to apprehend students' deficits or disorders which would be impairing their learning.

In this scenario, the classification and diagnosis of diseases/pathologies have stood out, such as IS, with other best known ones (ADHT, dyslexia and CAPD), which have been used to "evidence" that difficulties in reading and writing are related to organic causes and symptoms. Understanding that events of failure in learning to write are caused by impairments in the visual/auditory processing, in the fine motor coordination, or in mechanisms of an impaired brain, explains why individual and clinical interventions have been adopted ultimately and traditionally to get over such problems.^{1,2,8,12}

The phenomenon of relating reading and writing appropriation and learning to the organic functioning, named medicalization, has not contributed to minimize "difficulties" emerging from the restricted access to the written language by a significant number of students. The medicalization of a socio-educational problematics prevents the

possibility to understand the actual factors involved in the process of "not learning according to what is expected".

Besides preventing the understanding of the complexity that surrounds such problematics, medicalization brings about negative consequences due to the internalization of the disease on the part of the learners, often hindering the progress of the learning process, which harms their quality of life^{2,8}.

Studies highlight that a significant share of the population within the educational context has been victim of the excess in diagnoses and referrals to specialized clinical screening. It calls the attention the recurrence of diagnoses which, according to studies held by teams of researchers^{3,7,8,9}, are founded in misleading and inconsistent criteria, formulated under cause-and-effect reasoning.

Thus, it is necessary that health professionals critically analyze the fact that clinical conditions and pathologies, whose symptoms impair language, behavior and learning, are controversial; that is to say, there has been no agreement on the occurrence of ADHT, developmental dyslexia or even Irlen Syndrome if the subjects keep their full cognitive and linguistic skills.

Final Considerations

The need of in-depth research can be identified in this study on the part of health and education professionals, who closely participate in the processes of writing appropriation, regarding the linguistic, social, cultural and economic processes involved in the conditions of appropriation and use of the written language, which affect Brazilian population in a unique, uneven way.

Therefore, it is necessary to approach theoretical-practical backgrounds which offer elements so that those professionals can prioritize, in their educational and clinical practice, the processes involved in spelling appropriation, the discursive and text dimensions which entail the written language, and the subjects' trajectory established with this type of language, beyond the spelling and letter writing-centered learning.

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