The cultural-historical method and its contributions for the research of the development of writing in all-inclusive schools located in contexts of linguistic diversity

O método cultural-histórico e suas contribuições para a pesquisa do desenvolvimento da escrita em escolas com tudo incluído localizadas em contextos de diversidade linguística

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ABSTRACT
This paper aims to analyse the contributions of the cultural-historical method to the understanding of the process of learning how to write in schools located in contexts characterized by linguistic diversity, considering both educational inclusion of students with special needs, and from multicultural contexts. Vygotsky (1931/2000) states that his method has three principles: 1) Historical analyses; 2) Analyses of contradictions and interruptions in human development; 3) Assumption that science would not be necessary if essence and appearance was correspondent to each other. Vygotsky researched the higher psychological functions, including writing. The development of writing is mediated by special higher psychological functions, which are internal human capacities, such as memory and perception. One of the main approaches of the experimental and genetic method in the cultural-historical theory consists in creating some situations that allow us to observe how some individuals solve specific problems, aiming to observe the zone of proximal development, that is, all that the individual is not able to do alone, but can do with mediation and external help.

Keywords: writing, linguistic diversity, literacy, inclusive education.

RESUMO
Este artigo tem como objetivo analisar as contribuições do método histórico-cultural para a compreensão do processo de aprendizagem de como escrever em escolas localizadas em contextos caracterizados pela diversidade linguística, considerando tanto a inclusão educacional de estudantes com necessidades
especiais, como de contextos multiculturais. Vigotski (1931/2000) afirma que seu método tem três princípios: 1) Análises históricas; 2) Análises de contradições e interrupções no desenvolvimento humano; 3) Assunção de que a ciência não seria necessária se a essência e a aparência fossem correspondentes entre si. Vigotski pesquisou as funções psicológicas superiores, incluindo a escrita. O desenvolvimento da escrita é mediado por funções psicológicas especiais superiores, que são capacidades humanas internas, como memória e percepção. Uma das principais abordagens do método experimental e genético na teoria histórico-cultural consiste em criar algumas situações que nos permitem observar como alguns indivíduos resolvem problemas específicos, visando observar a zona de desenvolvimento proximal, ou seja, tudo o que o indivíduo não é capaz de fazer sozinho, mas pode fazer com mediação e ajuda externa.

Palavras-chave: escrita, diversidade linguística, alfabetização, educação inclusiva.

1 INTRODUCTION

We intend to examine in this paper the contributions of the cultural-historical method for the research of the development of writing in school contexts where linguistic diversity and inclusive education are present. The specific objectives are: 1) to study the development of writing in accordance to the cultural-historical theory and its method; 2) to systematize the problem of linguistic diversity in schools and its relationship with the development of writing.

In this research, the problem emerged from ethnographic research conducted in a doctorate in 2010 (André, 2014), in Foz do Iguaçu, Brazil. Throughout 2010, observations were made to understand how two teachers were using literacy textbooks in their classes. The conclusion was that the textbook does not help in teaching the relationship between letters and sounds because it does not cover linguistic diversity. For example, when the teacher taught the letter “J”, students with Hispanic descent use the sound of the letter “Z” instead. The Brazilian city of Foz do Iguaçu is situated on a border with Argentina and Paraguay and therefore linguistic diversity is present. The languages spoken in class are not just one, and the differences affect the development of the writing process.
2 LINGUISTIC DIVERSITY IN BRAZIL

Portuguese is the official language in the Federative Republic of Brazil, in accordance to the Federal Constitution of 1988. The Brazilian sign language, spoken by deaf people was recognized by the law 10.436/2002, and the decree 5.626/2005, and must be used in public institutions, like hospitals and schools. There are, however, other languages spoken in Brazil, in accordance to the national language guide produced by the National Institute of Historical and Artistic Heritage (Instituto do Patrimônio Histórico e Artístico Nacional - IPHAN, 2016). The IPHAN guide registers more than 100 languages in Brazil, divided into: immigrant languages, creole languages, indigenous languages, Afro-Brazilian languages, and sign languages. The Atlas of the World’s Languages in Danger (UNESCO, 2011) estimates that 11 Brazilian languages were already extinct, and that 179 more run the risk of extinction.

In addition, there are border languages, formed by the contact between two or more languages. For this reason, understanding the linguistic diversity of Brazil demands to know which are the official languages of the countries that have borders with Brazil: Argentina, Bolivia, Guyana, French Guiana, Paraguay, Peru, Suriname, Uruguay, and Venezuela. The table below presents the official languages in those countries, in accordance to their Constitutions, and the number of languages that have been extinguished or have been at risk of extinction (UNESCO, 2011).

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>OFFICIAL LANGUAGE</th>
<th>Languages at risk of extinction</th>
<th>Extinct languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>Doesn’t have an official language</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Bolívia</td>
<td>Castilian and all languages of indigenous groups: Aymara, Araona, Baure, Bésiro,</td>
<td>36</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Canichana, Cavineño, Cayubaba, Chácobo, Chimán, Ese eija, Guaraní, Guarasu’we,</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Guarayu, Itonama, Leco, Machajuyai-kallaway,</td>
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</table>
At the border, the contact between languages is inevitable. The contact between Portuguese and Castilian\(^1\) in Brazilian schools demands specific practices because both are sister languages, that is, resulting from different evolutions of one mother-tongue. (Dubôis et al, 1973). Portuguese and Castilian are the more similar Latin sister languages. There are phrases entirely equal both in Castilian and Portuguese (Nascentes, 1936).

Abstracting from border languages, and from autochthonous languages, it is necessary to consider the linguistic variations of a same language. Lyons

\(^1\) In accordance to Pharies (2006), the three linguistic key events of Spanish history were the introduction of Latin by the Romans, the Muslim invasion and the Reconquista of the Iberian Peninsula to the Moors. The Reconquista allowed the adoption of Castilian as the Royal Chancellery official language in the end of Fernando III (1230-1252) reign, when Castilian became more spoken than Latin. Considering that Castilian has no alluded native people from Iberian Peninsula, it seems that Castilian and Spanish are the same language. Castilian became the name of the language while Spain became the name of the country that unified itself, turned into a national state in 1492 and colonized other countries in America, Asia, Oceania and Africa. Thus, the denomination Spain reinforced the colonization. In addition, in the Bolivian’s Constitution the official language is Castilian.
(1981) explains the scale language-dialect-idiolect. Dialect covers differences in grammar and vocabulary. Accent means phonetic differences in pronunciation. The idiolect is the individual linguistic variation, or peculiar habit of a particular person. One same person can use different linguistic variations aiming to adapt to different contexts, because there are certain linguistic variations socially stigmatized in reason of the belief that the pronunciation is indicative of social class. The variant relates to the vernacular language. On this subject Barbosa (2015) explains that the normative patterns are artificial fixations, as all languages present variations.

Another theme connected with the problematic of this research is the inclusive education in Brazil. In 1994 the United Nations Educational, Scientific and Cultural Organization (UNESCO) organized the World Conference on Special Needs Education: Access and Quality. The conference resulted in educational guidelines for the whole world, expressed in The Salamanca Statement and Framework for Action on Special Needs Education. Since this conference, Brazil has been adopting inclusion in educational policies. Brazil’s Federal government has been implementing, especially since 2000, the educational inclusion of deaf children. In 2002, it was enacted in Brazil a law which made official the Brazilian sign language, and since then deaf people have been studying it in regular schools, which are required to hire professionals to mediate the communication between deaf students, teachers and other students. In some schools, deaf children study in literacy classrooms together with the hearing children. If writing is a representation of sounds, how can deaf children learn if they do not have access to sounds?

Therefore, in this research proposal, linguistic diversity concerns both educational inclusion of students with special needs and multicultural contexts. Educational inclusion is the practice of allocating deficient students in regular classes. As a consequence of inclusive education, Brazilian sign language is present in schools, besides other linguistic varieties, indigenous languages, immigrant languages and Creole languages, in accordance with the National Institute of Historical and Artistic Heritage (IPHAN).
The assumption of this study is that Vygotskian approach method can contribute to the problematic of the relationship between linguistic diversity and inclusive education in schools, with the focus on literacy teaching, and the development of learning and writing. The complexity of inclusive education and linguistic diversity in schools demands scientific investigation. Rubtsov (2016) argues that the cultural-historical theory contributes with modern science, especially in what concerns the human activity approach, even if it is still a hypothesis that needs to be developed in full-scale.

3 THE DEVELOPMENT OF WRITING ACCORDING TO CULTURAL-HISTORICAL THEORY

The hypothesis in this study proposal is that the dialectical, genetic, and historical method is important to bring scientific advances that would help solve problems in education, what is particularly important in Brazil, where illiteracy affects 7.0% of the population, according to the Brazilian Institute of Geography and Statistics (IBGE).

The cultural-historical theory allows us to understand the development of writing and its role in child development. Alexei Leontiev (1903-1979), Alexander Luria (1902-1977), Daniil Elkonin (1904-1984), and Vasily Vasilovich Davydov (1930-1998) are some of the Russian researchers that have developed the cultural-historical method, a legacy of the Russian psychologist Lev Vygotsky (1896-1934). According to Leontiev (1979), differently from the idealistic approach, for a psychological approach founded on Marxist philosophy, human consciousness is formed by activity, not by language. Language is a tool that was historically and collectively based on man’s practical activity. Leontiev (1979) explains that Vygotsky introduced dialectics in psychology when he developed his own genetic-historical method, in order to investigate human activity. In Davydov (1990), the experimental-genetic method allows to reveal the mechanisms of mental development.
Vygotsky’s method is dialectical and it allows us to understand that grammar enables learning and improvement of any language. Vygotsky (1931/2000) argues that his method is based on 3 principles:

1) Historical analyses of each higher psychological function: for this reason, writing is studied in its development in human history, from the time human beings drew in caves to represent ideas, and also in child development, from the first representative actions, such as drawing and gestures.

2) Analyses of contradictions and interruptions: using the experimental method, Vygotsky evaluated how higher psychological functions can be developed by the child with disabilities. He worked in the hypothesis that the investigation about interruptions in development makes it possible to understand the genesis of each higher psychological function.

3) Assumption that there is no direct correspondence between genotype (essence, genetic information) and phenotype (external appearance). According to Vygotsky, science would not be necessary if essence and appearance was correspondent to each other.

These are some assumptions of the historical, materialist and dialectical method adapted by Vygotsky from Marx.

An important aspect is the experimental method. In research made according to the cultural-historical theory the experimental method was used, and it consists in creating some situations that allow for the observation of how some individuals solve specific problems. This can be observed in Luria’s experiment, quoted in this article. However, differently from other experiments where the same method was applied, in the cultural-historical method the way problems are solved with mediation can be observed, aiming to determine the zone of proximal development, that is, all that an individual is not able to do alone, can be done with mediation and external help. Everything an individual is able to do with mediation and external help can then be the next stage of his/her development.
Using the genetic method, Vygotsky investigated the development of higher psychological functions and disabilities, the latter considered by the author a key to understand the former.

Luria’s research is an example of how this method was applied to research the development of writing. Luria (1928) conducted an investigation into the prehistory of writing in child development, noting the first use of scribbles as a tool and meaning. The experiment consisted of giving children who could not write a task to remember a large number of sentences, and encouraging them to record the sentences. He gave each child a sheet of paper and told them to jot down or write the sentences presented. Luria discovered 3 phases in the development of writing. The first is the scrawling stage, prewriting, or pre-instrumental phase. Children of 4 or 5 years old were unable to use writing as a tool and meaning, and didn’t use it to record sentences. The second is the topographical phase. Children create a system of technical memory using topographical marks representing numbers of elements and its relations, helping them to remember sentences. In the third phase children began to create rudiments of literacy. Thus, the history of writing in child development begins before learning the letters. Before making sense of writing, children can elaborate primitive methods using symbolic devices to simplify the act of recording. Mnemonic function is the prehistory of writing in child development.

Vygotsky (1931/2000) considered that the mnemonic function originated writing in the history of humanity. Besides, the understanding that things can be used to represent other things is as important in the prehistory of writing as it is the child’s development of writing. In child development, gestures, drawings, and games are all important components, and a kind of prehistory of writing, they are all forms of representation. In accordance to Vygotsky, preschool education is important because since early childhood writing must be taught through ludic activities, in a natural way.

The importance of play in the development of writing is evident, according to the principles of the cultural-historical method. Leontiev and Elkonin developed research on the psychology of children’s play which showed its social origin.
According to Elkonin (1976/2009), such research evidenced that the development of play does not occur spontaneously, but is influenced by education and its basic content is the human being, and his work and activity. In play, the child transfers meaning from one object to another and this is the beginning of mastering social relationships. The representational activity is one of the characteristics of writing, and for this reason play is an important activity in the process of teaching reading and writing.

Vygotsky (1931/2000) also argues that, because of mediation, at school, the child has only a few years to develop, while in fact the development of writing in the history of mankind has taken centuries. The mediation of learning can be done at school, where teachers should use play and also lead the child to understand the cultural function of writing in society and to feel the need to know how to read and write. Writing today is more than a mnemonic system; it is a language and has an important role in human culture. Writing makes possible many interactions and activities, such as texting and communicating with people for information and pleasure. Writing learning does not occur as a mere motor activity that requires only recognition and imitation of letters. Writing is a language, a cultural function but also a system of signs. Vygotsky (1931/2000) considers that writing is a system of tools and signs. In accordance to Marxist philosophy, mediation characterizes human activity. Human beings work and transform their environments and themselves because they use tools, and plan their activities mentally using internal tools: signals such as perception, memory, and creativity. Thus, tools and signs mediate human activity. The development of writing is mediated by special higher psychological functions which are inner capacities of the human being, such as memory and perception. In addition, writing mediates the development of the special higher psychological functions. Writing is itself a higher psychological function, both internal and external, a sign and a tool, like language and arithmetic.

According to Delacroix, Vygotsky (1931/2000) argues that the peculiarity of the writing system is the fact that it represents the sound of words before the representation of their meaning. The conception that writing represents sounds
requires the representational capacity whose development happens through play, drawing, and gesture.

Vygotsky suggests that teaching at school should be mediated by play and activities that make children feel the need to learn how to read and write, avoiding mechanical writing training without making any sense. Vygotsky criticizes the Italian pedagogue Maria Montessori, whose approach focuses only on the motor development of writing. In his research about the relationship between thought and language, Vygotsky (1933/1983) suggests the importance of silent reading for the student. In a first stage of the development of writing, the student thinks about the sounds of the letters before understanding the meaning of writing. Silent reading helps the student read fluently, ascending more directly to the meaning, making it possible to be free from the sounds of writing.

In *Thinking and Speech* (1933/1983), Vygotsky argues that teaching normative grammar is important because it helps students to understand their mother tongue, and foreign languages. Grammar promotes a kind of reflexion that allows us to understand scientific concepts and develop writing skills. According to this assumption, this paper argues that bilingual contexts require bilingual schools, which make it possible to improve student's language and the learning of the official language of the country the school belongs to.

Deaf people, foreign immigrants, and indigenous groups that do not speak the official language of their country need a bilingual education. The grammar of the mother tongue needs to be learned because the official language of the country must be learned through the mother tongue. Vygotsky (2000/1931) argues that bilingualism is favourable for psychological development. The study of two or more languages improves language knowledge.

Vygotsky (2000/1931) also admits that learning how to read and write using the alphabetic system requires seeing and hearing, because letters are visual and represent sounds. For this reason, blind people and deaf people need another way to develop writing. Braille system uses raised dots that can be read by fingers, so another way is needed for the blind. Deaf people can learn writing through sign language. Writing has a cultural function in society, so it is important
for all people to have access to it. The task of pedagogy is to develop means to make this possible.

It is possible to conclude that the activity theory is central to the problem of literacy and in Vygotsky’s theory, and allows us to understand that writing is a system of signs and tools, with which human beings transform environments and themselves and its development requires capacity of representation. According to Vygotsky (1931/2000), the development of writing depends on understanding that some things can be used to represent other things, like sounds can be represented by letters. For this reason, play and drawing are important for learning to write.

Writing has cultural functions in society that are useful in all kinds of human interactions and activities, such as taking a bus, writing a letter, getting knowledge and pleasure, communicating ideas, and defending human rights. Therefore, the development of writing requires the learner to feel the need to learn how to read and write. For this reason, reading literature, teaching scientific concepts, and performing activities where writing is important are practices that should be used in the literacy process.

One important point in Vygotsky’s theory about the development of writing is the importance of early child education. Play and all activities that help develop representative thinking, such as developing the need to read and write are preschool tasks. According to the Brazilian main educational law (9394/1996), compulsory education in Brazil applies from 4 to 17 years old, meaning that the government is required to provide schools for all children and adolescents in this age group. Investment in bilingual education, through play and artistic activities, from preschool, is important especially for immigrant communities, border towns, indigenous groups, and deaf people.

4 LITERACY: SOME IDEAS

The cultural-historical method allows us to understand some issues concerning the development of writing, which can be summarized in some practical principles:
1) Learning to read and write requires understanding that things can be used to represent other things. For this reason, activities involving play and drawing are important for early childhood education, pointing to the importance of preschool.

2) The assumption that writing represents sounds helps to understand that teaching the code is important in the literacy process. Students need to learn the sounds of the letters.

3) However, before learning the code, it is important to understand why writing is useful in cultural life. Students need to feel the need to write. For this reason, in school actual activities involving writing, for example, reading literature, writing letters, and reading all kinds of texts present in daily life, should be done.

4) Linguistic diversity must be considered in the literacy process. Some contexts require bilingual education. Grammar knowledge allows you to learn foreign languages and the mother tongue allows access to other languages.

5) Deaf people do not have access to sounds. For this reason it is necessary that they can learn sign language at school. Through sign language deaf people can develop writing and school knowledge. The global method of literacy allows deaf people to access writing because its assumption is to teach complete words in texts, teaching the relationships between letters and sounds. But this demands that when teaching texts be used in meaningful contexts. According to Svartholm (2014), the ideal education for deaf people is bilingual education. The first language should be sign language. It is particularly important because more than 90% of deaf children are born into hearing families, who are unable to communicate with them. So, the school has the task of teaching sign language and the official language must be taught in writing. However, the language of instruction for deaf children should be sign language.

5 CONCLUSION

Brazil is characterized by linguistic diversity and its school system covers from the age of 4 to 17 years old. In this context, Vygotsky theory brings important
contributions to understand the development of reading and writing. In the Vygotsky theory, writing is a system of signs and tools whose learning demands understanding of representation modes and mastery of the writing system. The prerequisite for this is to feel the need to read and write understanding its cultural functions in society. In the literacy process, teaching relationships between letters and sounds is important but it is complex, because of the linguistic diversity present in Brazil, where there are more than 100 languages, including indigenous languages, signal languages, languages of immigrant communities, border languages, creole languages, and sign languages. However, in Vygotsky theory, bilingual education improves knowledge about language and this proposal may be important for Brazil. Bilingual education can not only improve writing and reading skills, but also enable survival of the minority group languages.
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