

## The orthographic writing of students in the literacy process

Fatima Aparecida de Souza Francioli <sup>I</sup>  

Vanessa de Souza da Silva <sup>II</sup>  

### Abstract

This research aims to analyze the spelling difficulties that a class of 2nd grade students in the Initial Years of Elementary School present in the process of writing words. Therefore, it became essential to discuss proficiency rates in Brazil, seeking to understand the scenario of literacy in light of national education public policies. This study was based on documents from the National Common Curricular Base (BNCC), the National Learning Assessment (ANA) and other sources that deal this topic, focusing on Historical-Cultural Theory. Bibliographic and documentary research along with an analysis of spelling changes identified in the dictation of words applied to the subjects of this investigation were used. It was found that, in teaching writing, the assimilation of spelling rules requires the student to have a highly complex capacity for abstraction of the symbols that constitute the alphabetic system, arising from the development of thought, which goes beyond the mechanism of learning centered on the acquisition of sounds and spelling of letters. It became clear that teaching literacy goes beyond coding and decoding, and that it is up to the teacher to master and understand written language and develop the students' psychic instruments, what the mind understands can be expressed by the hands that write.

**Keywords:** National literacy assessment; Proficiency; Orthographic writing; Historical-Cultural Theory.

<sup>I</sup> PhD in School Education from São Paulo State University "Júlio de Mesquita Filho". Professor at the State University of Paraná.  
E-mail: fas.francioli@gmail.com

<sup>II</sup> Bachelor's degree in Pedagogy from the State University of Paraná. School Yard Supervisor at Colégio Estadual São Vicente de Paula.  
E-mail: vasouzaa97@gmail.com

## A escrita ortográfica dos alunos em processo de alfabetização

### Resumo

Esta pesquisa tem como objetivo analisar as dificuldades ortográficas que uma turma de alunos do 2º ano dos Anos Iniciais do Ensino Fundamental apresenta no processo da escrita de palavras. Para isto, tornou-se fundamental discutir os índices de proficiência, no Brasil, procurando compreender o cenário da alfabetização, diante das políticas públicas da educação nacional. Este estudo se fundamentou em documentos da Base Nacional Comum Curricular (BNCC), da Avaliação Nacional de Alfabetização (ANA) e outras fontes que abordam tal temática, tendo como foco a Teoria Histórico-Cultural. Foram utilizadas a pesquisa bibliográfica e documental e a análise das alterações ortográficas, identificadas no ditado de palavras aplicado aos sujeitos desta investigação. Verificou-se que, no ensino da escrita, a assimilação das regras ortográficas exige do aluno uma capacidade altamente complexa de abstração dos símbolos que constituem o sistema alfabético, advinda do desenvolvimento do pensamento, que ultrapassa o mecanismo de uma aprendizagem centrada na aquisição de sons e soletração de letras. Ficou evidente que alfabetizar é ir além da codificação e da decodificação, cabendo ao professor o domínio e a compreensão da linguagem escrita e o desenvolvimento dos instrumentos psíquicos dos alunos, o que o pensamento compreende pode ser expresso pelas mãos que escrevem.

**Palavras-chave:** Avaliação Nacional de Alfabetização; Proficiência; Escrita ortográfica; Teoria Histórico-Cultural.



## La escritura ortográfica de los estudiantes en el proceso de alfabetización

### Resumen

Esta investigación tiene como objetivo analizar las dificultades ortográficas que presenta una clase de estudiantes de 2º año de los Años Iniciales de Educación Fundamental, en el proceso de escritura de palabras. Para ello, se hizo imprescindible discutir los índices de competencia en Brasil, buscando comprender el escenario de la alfabetización a la luz de las políticas públicas de educación nacionales. Este estudio se basó en documentos de la Base Curricular Común Nacional (BNCC), la Evaluación Nacional de Alfabetización (ANA) y otras fuentes que abordan esta temática, centrándose en la Teoría Histórico-Cultural. Se utilizó la investigación bibliográfica y documental y el análisis de los cambios ortográficos identificados en el dictado de palabras aplicado a los sujetos de esta investigación. Se encontró que, en la enseñanza de la escritura, la asimilación de las reglas ortográficas exige del estudiante una capacidad altamente compleja de abstracción de los símbolos que constituyen el sistema alfabético, derivada del desarrollo del pensamiento, que va más allá del mecanismo de aprendizaje centrado en la adquisición de sonidos y la grafía de las letras. Quedó claro que la enseñanza de la alfabetización va más allá de la codificación y decodificación, siendo el docente responsable de dominar y comprender el lenguaje escrito y desarrollar los instrumentos psíquicos de los estudiantes, lo que el pensamiento entiende puede ser expresado por las manos que escriben.

**Palabras clave:** Evaluación nacional de alfabetización; Competencia; Escritura ortográfica; Teoría Histórico-Cultural.



## Introduction

Discussing literacy in Brazil invariably entails confronting a fundamental problem: children are not learning to read and write as they should. According to data from the School Census (Brazil, 2024a, p. 3), the “[...] municipal school system is primarily responsible for providing education from the 1st to the 5th grade, with 10 million enrolled students (69.5%), which represents 86.1% of public education,” benefiting from national educational policy proposals. This information reveals that municipal education systems constitute the main pillar of Basic Education in Brazil.

However, this does not necessarily mean that students are receiving quality education, since, according to the results presented in 2016 by the National Literacy Assessment (Avaliação Nacional de Alfabetização – ANA), 59.9% of students enrolled in the 3rd grade of the Early Years of Elementary School were assessed at an ineffective level. Notably, these same students had already been exposed to formal schooling for at least three years (Brazil, 2018).

Considering this context, in which literacy is understood as the appropriation of the alphabetic writing system articulated with the progressive mastery of reading and text production skills, exercised autonomously, the aforementioned ANA results are cause for concern, as students fail to adequately meet the expected learning outcomes.

Through the analysis of documents published by the Ministry of Education (MEC), it was observed that the ANA, as an assessment instrument, has proven to be an important element in revealing both the skills evaluated and the results achieved in the reading and writing processes during the Early Years of Elementary School. However, when comparing the results presented by the ANA in 2019 and subsequently in 2021, a decline in proficiency levels can be identified, reflecting a deterioration in the Brazilian educational scenario.

Thus, taking into account the current challenges surrounding the process of learning to read and write during literacy, and considering that these



challenges may contribute to the continuation of school failure in subsequent years, the general objective of this research was defined as analyzing the difficulties in orthographic writing presented by a group of students enrolled in the 2nd grade of the Early Years of Elementary School.

In this regard, the following specific objectives were established:

- a) to present the literacy and learning proficiency levels indicated by the ANA in 2019 and 2021, as well as data related to the Portuguese Language component of the National Common Core Curriculum (BNCC);
- b) to identify how the BNCC guides the teaching of written language for students in the 2nd grade of the Early Years of Elementary School;
- c) to evaluate the orthographic writing of the students selected as subjects of this investigation, taking as reference studies developed within the framework of Historical-Cultural Theory.

From this perspective, the study was grounded in official documents such as the BNCC (Brazil, 2017), the ANA (Brazil, 2024a), and in academic works by authors such as Zorzi (1998; 2017) and Dangiό and Martins (2015). The research was based on the premise that “[...] bibliographic research is usually developed as part of a broader study, aiming to identify available knowledge on the subject, the best formulation of the research problem, or the construction of hypotheses” (Gil, 2002, p. 88). The study also included documentary research, analyzing institutional records and documents relevant to the topic as theoretical and contextual support. Documentary research “[...] is important not because it definitively answers a problem, but because it provides a better view of that problem or hypotheses that lead to its verification by other means” (Gil, 2002, p. 47).

To identify orthographic writing alterations, an exploratory analysis was conducted based on an instructional activity supported by empirical data collected during a word dictation task administered by the classroom teacher to the study participants, who were in the process of literacy acquisition. The purpose was to observe how these orthographic issues could be quantified



without losing sight of a critical qualitative analysis grounded in Historical-Cultural Theory.

Furthermore, the research incorporated data from the most recent ANA, conducted in 2021, establishing a comparison between national results and those produced through the word dictation task applied to the participants during the investigation.

### **Skills Proposed in Educational Policies: Analysis of ANA and BNCC Data on the Portuguese Language**

When addressing literacy, it is necessary to understand and distinguish between a literate student and a student who is merely alphabetized. According to Zorzi (2017), literacy is understood as a set of knowledge codes transmitted through written language, and throughout this process, society enacts its interactions related to written language.

Based on the framework of Historical-Cultural Theory that underpins this analysis, literacy cannot be reduced to the mere teaching of encoding and decoding words, since reading and writing extend far beyond this skill, which alone is insufficient to meet the demands of the social environment.

For Vygotsky, “learning at school age is the decisive and determining moment of the entire course of the child’s intellectual development, including the development of concepts” (Vygotsky, 2000, p. 262). With regard to school learning, Vygotsky argues that written language emerges even before the child enters school, a process he refers to as the prehistory of writing.

Research has shown that the history of writing in children begins long before the teacher first places a pencil in their hands and teaches them how to form letters. Without understanding the prehistory of children’s writing, it becomes impossible to comprehend how the child is able to immediately master the complex procedure of cultural behavior that is written language. This process becomes intelligible only if the child has assimilated and elaborated, during the early school years, a series of procedures that fully approximate the



writing process, preparing and greatly facilitating the mastery of both the idea and the technique [...] (Vygotsky, 1995, p. 194).

Similarly, Luria (2006, p. 159) emphasizes that the act of writing fosters the development of higher psychological functions, as at some point the child transforms writing into an auxiliary memory sign when attempting to “[...] use the marks they have made to guide their recollection [...]”. Thus, when the child understands how to write using the alphabetic system, a mental reorganization occurs, ultimately leading to the mastery of what is perhaps “the most invaluable instrument of culture” (Luria, 2006, p. 189).

Indeed, during the literacy process, as individuals interact with the proposed activities, the need arises to comprehend texts, interpret them, and act critically upon them, expressing ideas coherently. From this perspective, literacy can be understood as specific knowledge that is inseparable from literate practices.

According to Zorzi (2017), literacy is an essential element in enabling individuals to become literate in a broader sense. With respect to literate practices, the same author defines them as processes that allow children and adults to engage with a wide variety of texts, such as short stories, news articles, comic strips, and culinary recipes, among others. In light of these considerations, it becomes important to identify proficiency levels in Brazil in order to monitor teaching attributes related to students’ full development and to examine the state of literacy within the scope of public educational policies.

According to the *Literacy Brazil Research Report*, assessment is necessary to understand students’ proficiency levels in Portuguese. As stated in the document,

A proficiency scale consists of numerical values and statistical indices, especially those derived from Item Response Theory (IRT) analyses, which make it possible to order student performance and skills along a continuum [...] organized by performance levels. Organizing data into scales is a means of translating the complexity of assessment results into something that can be visualized, and the chosen metric



varies across assessments to differentiate examinations and minimize misinterpretations” (Brazil, 2024b, p. 33)

Also according to Luria (2006, p. 159), the act of writing supports the development of higher psychological functions, because at some point the child will transform their writing into an auxiliary memory sign when attempting to “[...] use the marks they have made to guide their recollection [...]”. Thus, when the child understands how writing operates through the use of the alphabetic system, a mental reorganization will occur, ultimately reaching “[...] the mastery of what is perhaps the most invaluable instrument of culture” (Luria, 2006, p. 189).

Indeed, during the literacy process, as individuals interact with what is proposed to them, the need arises to comprehend texts, interpret them, and act critically in relation to them, expressing themselves coherently. From this perspective, literacy can be understood as specific knowledge that is inseparable from literate practices.

According to Zorzi (2017), literacy is an important element for individuals to become literate. With regard to literate practices, the same author defines them as a process that enables children and adults to come into contact with a wide variety of texts, such as short stories, news reports, comic strips, and culinary recipes, among others. In light of the ideas presented, we consider it important to identify proficiency indices in Brazil in order to monitor teaching attributes related to students’ full development, as well as to observe the current state of literacy in light of public educational policies.

According to the *Literacy Brazil Research Report*, assessment is necessary to understand students’ proficiency levels in the Portuguese language. According to the document,

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According to the ANA document (Brazil, 2024a), the proficiency assessment applied in 2021 to 2nd-grade students in the Early Years of Elementary School took place during the COVID-19 pandemic, a fact that made the activities considerably more complex to carry out. One example of this is that 29,819 students were expected to take the assessment during that period; however, only 18,614 were present, as shown in the ANA report (Brazil, 2024a, p. 16).

According to the SAEB document (Brazil, 2024b), the proficiency assessment for students in the 2nd grade of the Early Years of Elementary School lasted 1 hour and 35 minutes and was conducted in two stages, with a 15-minute break for rest. It is worth noting that students with disabilities were granted an additional 20 minutes to complete the test.

The objective was to answer a set of questions. In the first stage, students answered 16 multiple-choice questions within 50 minutes; in the second stage, they answered three open-ended questions within 30 minutes. According to the SAEB document (Brazil, 2024b), the 2nd-grade assessment aims to evaluate, through Portuguese Language tests, students’ mastery of the alphabetic principle and their reading and written production skills.

Still regarding the ANA, it presents students’ performance results considering eight skill levels, with Level 1 being the most basic and Level 8 the highest on the scale (Brazil, 2024a). The analysis of these results provides important data on the proficiency of the subjects analyzed, in addition to indicating the skills in which they need improvement.

Next, **Chart 1** will be presented, representing the proficiency scale for interpreting Portuguese Language results from SAEB for students in the 2nd grade of the Early Years of Elementary School – 2021.



**Chart 1** – Proficiency scale for interpreting Portuguese Language results – SAEB, 2nd grade of the Early Years of Elementary School, 2021.

| Level   | Level representation   |
|---|--|
| Below Level 1<br>Less than<br>650   | Students placed below Level 1 most likely do not master any of the skills that comprised the first set of tests for this area and stage of schooling.  |
| <b>Level 1</b><br>Greater than<br>ore qual to<br>650 and less<br>than 675 | At this level, students are most likely able to: <ul style="list-style-type: none"> <li>• Relate consonant sounds with direct regularities to their written records at the beginning of dictated words;</li> <li>• Relate the sound of the initial syllable of a disyllabic word or the intermediate syllable of a trisyllabic word, with a canonical syllabic structure – or with canonical and non-canonical syllabic structures – to its graphic representation, based on dictated words;</li> <li>• Read disyllabic words with canonical syllables, or with canonical and non-canonical syllables, from dictated words, with image support;</li> <li>• Read trisyllabic words with canonical syllables from dictated words, with image support.</li> </ul> |
| <b>Level 2</b><br>Greater than<br>or equal to<br>675 and less<br>than 700 | In addition to the skills described at the previous level, students are most likely able to: <ul style="list-style-type: none"> <li>• Relate consonant sounds with contextual regularities to their written records at the beginning of dictated words;</li> <li>• Read trisyllabic words with canonical and non-canonical syllables from dictated words, with image support;</li> <li>• Read polysyllabic words with canonical syllables, or with canonical and non-canonical syllables, from dictated words, with image support.</li> </ul>  |
| <b>Level 3</b><br>Greater than<br>or equal to<br>700 and less<br>than 725 | In addition to the skills described at previous levels, students are most likely able to: <ul style="list-style-type: none"> <li>• Read sentences with simple clauses, in direct order and active voice, relating the sentence heard or the scene presented in the image to its written record;</li> <li>• Read sentences with compound clauses (two clauses), in direct order, relating the scene presented in the image to its written record;</li> <li>• Write, in an alphabetic manner, with substitutions, inversions, or additions of graphemes, words with canonical syllables or with canonical and non-canonical syllables, with direct or contextual regular correspondences between letters and phonemes, based on dictation.</li> </ul>            |



|  |   |
|--|---|
| <p><b>Level 4</b><br/>Greater than or equal to 725 and less than 750</p> | <p>In addition to the skills described at previous levels, students are most likely able to:</p> <ul style="list-style-type: none"> <li>• Locate explicit information at the end of very short texts (two lines);</li> <li>• Write, orthographically, trisyllabic words with canonical and non-canonical syllables, with direct regular correspondences between letters and phonemes, based on dictation;</li> <li>• Write a text appropriate to the communicative purpose of inviting, although without specifying the event (party), even if it presents other required elements (place, date, time, and addressee). The text may present orthographic deviations, which may or may not compromise comprehension, or segmentation deviations.</li> </ul>  |
| <p><b>Level 5</b><br/>Greater than or equal to 750 and less than 775</p> | <p>In addition to the skills described at previous levels, students are most likely able to:</p> <ul style="list-style-type: none"> <li>• Locate explicit information in short texts (four to six lines), such as notes, chronicles, and fragments of children's short stories;</li> <li>• Infer the topic of a poster;</li> <li>• Infer information in texts that articulate verbal and non-verbal language, such as posters and comic strips;</li> <li>• Write, orthographically, trisyllabic words with canonical syllables, with contextual regular correspondences between letters and phonemes, based on dictation.</li> </ul>  |
| <p><b>Level 6</b><br/>Greater than or equal to 775 and less than 800</p> | <p>In addition to the skills described at previous levels, students are most likely able to:</p> <ul style="list-style-type: none"> <li>• Recognize the purpose of texts based on observation of the structural elements that compose the genre, such as posters and shopping lists;</li> <li>• Write, orthographically, polysyllabic words with canonical syllables, with direct regular correspondences between letters and phonemes, based on dictation.</li> </ul>  |
| <p><b>Level 7</b><br/>Greater than or equal to 800 and less than 825</p> | <p>In addition to the skills described at previous levels, students are most likely able to:</p> <ul style="list-style-type: none"> <li>• Infer information in texts of medium length;</li> <li>• Infer the topic of texts of medium length;</li> <li>• Write, orthographically, trisyllabic words with canonical and non-canonical syllables, with contextual regular correspondences between letters and phonemes, based on dictation;</li> <li>• Write a text appropriate to the communicative purpose of inviting someone to a party, using words or expressions related to the communicative situation and the presentation of the event to which the invitation is made, and possibly including other required elements (place, date, time, and addressee), correctly segmenting all words and spelling them in a way that does not compromise text comprehension.</li> </ul> |
| <p><b>Level 8</b><br/>Greater than or equal to 825</p>                   | <p>In addition to the skills described at previous levels, students are most likely able to:</p> <ul style="list-style-type: none"> <li>• Infer information in long texts;</li> <li>• Infer the topic of long texts.</li> </ul>   |

**Source:** Adapted from the SAEB Results Report (Brazil, 2024b, pp. 34–36).



In view of the above, we understand that students who are below Level 1 present difficulties and do not master the aforementioned skills. Levels 1 and 2 refer to reading, which means that, at the first level, individuals should be able to read canonical and non-canonical disyllabic words and canonical trisyllabic words through word sounds, and may also perform reading with the support of images. At Level 2, students should already be able to read trisyllabic and polysyllabic words and canonical and non-canonical syllabic terms. At Levels 1 and 2, individuals should be able to perform reading with image support, which facilitates comprehension and contributes to students' development during the literacy process. At Level 3, students should be able to read sentences with image support and record words in an alphabetic manner through dictation.

At Level 4, students should be able to write trisyllabic words orthographically, demonstrating reasonable knowledge of letters and phonemes. Level 4 students should be able to comprehend two-line texts and also write an invitation; however, they still do not demonstrate mastery in explaining place, date, and time. Level 4 students present slips in writing that compromise interpretation. At Level 5, students should be able to correctly write trisyllabic words from dictation, as well as comprehend texts and identify genres such as notes, chronicles, and children's short stories. They should also be able to understand and associate linguistic text genres, such as comic strips.

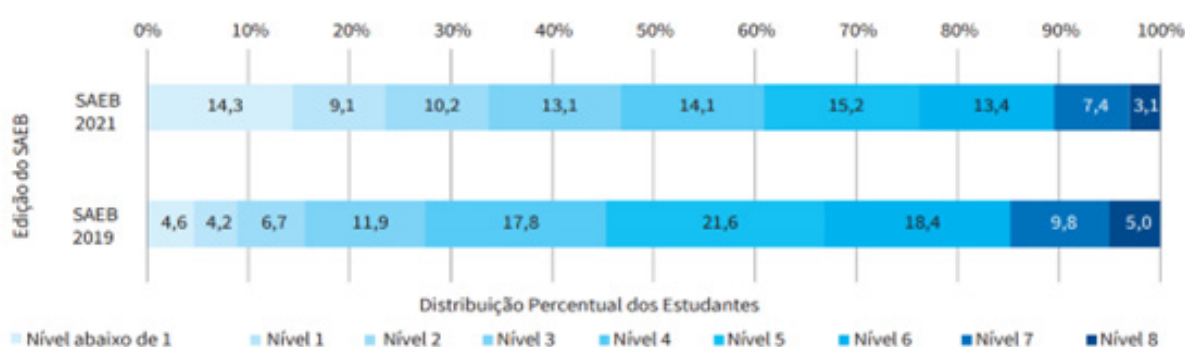
At Level 6, students should know how to correctly write canonical polysyllabic words from dictation. At Level 7, they should be able to write texts, even if spelling inaccuracies are present, as these do not interfere with reader comprehension. Finally, students at Level 8 should master all Portuguese language skills.



Within the context of proficiency scale levels, the performance results of students in the 2nd grade of the Early Years of Elementary School from the 2021 SAEB edition were presented and compared with the previous edition conducted in 2019 in Brazil.

Table 1, which will be presented next in this article, shows the 2021 proficiency levels, which were compared with the results of the 2019 SAEB.

**Table 1** – Percentage distribution of students by proficiency scale levels in Portuguese Language – SAEB, 2nd grade of the Early Years of Elementary School, Brazil, 2019 and 2021.



**Source:** Adapted from the SAEB Results Report (Brazil, 2024b, p. 38).

Observation of Table 1 enabled us to understand that, in 2021, the greatest disparity occurred at Level 5, with 15.2% of students demonstrating the ability to write, orthographically, trisyllabic words with canonical syllables. It was also possible to verify that the concentration of students at Level 1, representing 14.3%, most likely does not master any Portuguese Language skills.

According to Brazil (2024a), regarding comparisons of proficiency in the country, it became evident that, in 2021, the concentration of students who mastered the skills corresponding to Levels 1, 2, and 3 was 46.7%; in 2019, it was found that 38.5% of the subjects presented similar levels. Thus, an increase of 8.2% in proficiency was observed.

With respect to proficiency Level 4, the data revealed an average of 14.1% of students who did not demonstrate such mastery or showed difficulty in comprehending short texts and/or writing trisyllabic words, canonical or non-canonical, orthographically, based on dictation. Furthermore, a decline was



observed in proficiency Levels 7 and 8, in which students demonstrated ease in interpreting medium-length texts and writing orthographically. According to the Report (Brazil, 2024b), in 2019, 14.8% of students showed ease with the complex skills of Levels 7 and 8; however, in 2021, there was a reduction in the number of students who mastered such skills, with the index dropping to 10.5%.

In 2019, the average proficiency in Portuguese Language in Brazil was 750; in 2021, however, a decline to 725.9 occurred. This decrease represented half of a standard deviation. **Graph 1** will present the average proficiency levels in the state of Paraná related to Portuguese Language in the years 2019 and 2021, as this is the state in which orthographic changes were identified in the word dictation applied in a municipal school to students in the 2nd grade of elementary school.

**Graph 1** – Proficiency in Portuguese Language, SAEB, 2nd grade of the Early Years of Elementary School, Paraná, 2024



**Source:** Adapted from the SAEB Results Report (Brazil, 2024b, p. 41).

According to Table 1, previously presented, the average Portuguese Language proficiency of students in the 2nd grade of the Early Years of Elementary School in the context of the state of Paraná was 762.1 in 2019 and



730.7 in 2021. We observed that a proficiency decline of 31.4% occurred in the state of Paraná when comparing the two editions.

In order to expand the analyses presented thus far, we next establish a discussion in light of the BNCC, as it is a normative document that defines the learning process of students in Basic Education, while also guiding national education and the corresponding outcomes.

### **The BNCC and the Teaching of Written Language for 2nd-Grade Students in the Early Years of Elementary School**

Examining how the BNCC guides the teaching of written language for students in the 2nd grade of the Early Years of Elementary School made it possible to understand that the development of reading and writing skills is a technical process that begins within the family and in Early Childhood Education. From the moment the student enters the Early Years of Elementary School, these skills begin to be further developed and deepened. Based on the BNCC document (Brazil, 2017, p. 89),

[...]in the Early Years of Elementary School, within the Orality axis, knowledge and use of oral language are deepened, as well as the characteristics of discursive interactions and speaking and listening strategies in oral exchanges; within the Linguistic/Semiotic Analysis axis, literacy is systematized, particularly in the first two years, and, over the following three years, the observation of regularities and the analysis of how language and other forms of language function and their effects in discourse are developed; within the Reading/Listening axis, literacy practices are expanded through the progressive incorporation of reading strategies in texts of increasing levels of complexity, as well as within the Text Production axis, through the progressive incorporation of strategies for producing texts of different textual genres.”

In line with Brazil (2017), from the Early Years onward, teachers are expected to develop more complex skills, which makes it necessary for them to master phono-orthographic relationships, that is, the relationships between sounds (phonemes) of spoken Brazilian Portuguese, in its varieties, and the letters (graphemes) of written Brazilian Portuguese. With regard to writing, the BNCC (Brazil, 2017, p. 86) indicates that



[...] the ‘mechanics’ or functioning of alphabetic writing for reading and writing primarily means perceiving the highly complex relationships established between speech sounds (phonemes) and written letters (graphemes), which involves phonological awareness of language: perceiving its sounds, how they are separated and combined into new words, among other aspects.

Thus, for the teaching of reading and writing, teachers should implement activities that allow students to acquire phonological knowledge, develop phonemic awareness, and explore vocabulary in order to learn new words. In addition, teachers should work on reading and writing by developing the writing of words, sentences, and short texts in both print and cursive forms. For students to be successful, they need to have knowledge of the main punctuation marks and know how to use the period, question mark, and exclamation mark appropriately (Brazil, 2017).

The BNCC (2017) proposes that students should work on skills that enable them to identify and produce notes, messages, notices, letters, e-mails, recipes (procedural texts), reports (digital or printed), as well as understand the specific formatting and layout of each of these genres (Brazil, 2017).

The ANA and BNCC documents are aligned in their proposals regarding skills and competencies; however, they serve different functions. In this regard, it is important to understand that the BNCC proposes ideas to be implemented with students in order to support the development of their logical reasoning. The skills that emerge from this study are used in the ANA performance assessment, whose results serve to identify students’ learning levels as well as the challenges they present. This process contributes to teaching practice, as teachers are expected to mediate and minimize students’ difficulties, moving toward meaningful teaching.

### **Analysis of the Orthographic Writing of 2nd-Grade Students in the Early Years of Elementary School**

Up to this point, we have analyzed the teaching and learning process of Portuguese Language, taking as reference the ANA data presented in the years 2019 and 2021, as well as the guidelines established by the BNCC. Thus, in order



to verify how the teaching of orthography has been occurring, we examined the mediated writing exercise of words applied by the classroom teacher to the subjects of this research. The activity was carried out at the end of the first semester of 2024, before the July school break, with a group of 21 (twenty-one) 2nd-grade students from a municipal school located in northwestern Paraná, with the purpose of observing students' written production and classifying the orthographic alterations presented. The teacher selected isolated words composed of complex, medium, and easy levels.

According to Zorzi (1998), there are cases in which the same sound may correspond to several letters or, conversely, situations in which a similar letter may represent different sounds. In order to more easily understand the relationships between letters, the author presents as an example the phoneme /s/, which may be represented by a variety of letters, such as “s, ss, c, ç”, among others.

In **Chart 2**, we present the set of words dictated by the classroom teacher in order to analyze students' mastery of writing, emphasizing multiple representations.

**Chart 2** – Words with multiple representations, aiming to analyze whether students are able to associate the appropriate correspondences between phonemes in writing

| DICTATION OF WORDS         |       |         |             |
|----------------------------|-------|---------|-------------|
| LETTER                     | EASY  | MEDIUM  | DIFFICULT   |
| “S” with the sound of “Ç”  | Assar | Ganso   | Travesseiro |
| “G” with the sound of “J”  | Gelo  | Viagem  | Girassol    |
| “S” with the sound of “Z”  | Casa  | Aviso   | Tesoura     |
|                            | Liso  | Tesouro | Presente    |
| “CH” with the sound of “X” | Chave | Bolacha | Machucado   |

**Source:** Prepared by the authors.

The students were given a blank white sheet of paper on which they wrote their name and the date (day, month, and year). Before beginning the dictation,



the classroom teacher instructed that each word should be written one below the other, totaling fifteen words of easy, medium, and complex levels. All words were spoken aloud, followed by strategic pauses so that students could write what they heard. During the dictation, the teacher observed that some children understood that the word had the sound of one letter but was supposedly spelled with another.

Zorzi (1998) points out that errors occur according to the origin of the word, since the way a term is spelled does not depend solely on how it is pronounced, but also on its origin, making it necessary, at times, to decide whether a word is written with s or c. At certain moments, alterations in writing may occur as a result of the transcription of the way the word is pronounced, an aspect known as “phonetic transcription.” The author clarifies that alterations, or orthographic errors, may occur due to modifications in the segmental structure of words, manifested through substitutions, omissions, additions, and inversions of letters (Zorzi, 1998).

Based on the material applied to the students, we analyzed their writing, considering that variations in their writing could occur due to the segmental structure of the words. **Chart 3**, below, presents the results of our analysis.

**Chart 3** – Number and percentage of students who write correctly or present orthographic errors and alterations

| Analysis of the writing of 21 students in the 2nd grade of the Early Years of Elementary School |          |     |
|---|----------|-----|
|   | Students | %   |
| Write correctly   | 7        | 33% |
| “Errors” or “orthographic alterations”  | 13       | 62% |
| Do not demonstrate any mastery of writing   | 1        | 5%  |

**Source:** Prepared by the authors.

From observation of Table 3, we verified that, of the 21 students present in the classroom on the day of the activity, 5% (one student) do not demonstrate



mastery of writing, 62% write in an orthographically conventional manner—a phenomenon classified as “errors” or “orthographic alterations”—and 33% write correctly. Furthermore, it was identified that the appropriation of writing occurs more easily for a specific group of students, while for others writing presents greater difficulty. According to Zorzi (1998, p. 43),

[...] identifying the nature of the alteration does not immediately explain its frequency of occurrence. We may consider that such a high percentage of errors of this type may result from the very frequency of words in the language that present the possibility of multiple forms of representation. These are words involving letters that represent the sound /s/ (s, ss, c, ç, sc, x, z), the sound /z/ (z, s, x), the sound /ʃ/ (x, ch), the sound /ʒ/ (j, g), the sound /k/ (c, q, k), the letters m and n at the end of syllables (representing nasal vowels), the use of the letter g (which may have the sounds /ʒ/ and /g/), the use of the letter r (representing the sounds /ʁ/ and /r/), and the use of the letter c (representing the sounds /k/ and /s/).

According to the author, orthographic alterations result from multiple representation and reliance on orality; however, over time, children gradually appropriate and write correctly. Still in Zorzi’s conception (1998), it is likely that, in a new data collection, the results will be better than the previous ones; however, if students do not demonstrate improvement in writing appropriation, even while in continuous contact with the orthographic system, learning may not be occurring adequately.

With regard to the dictation applied to verify students’ orthographic difficulties, this task raised questions about the effectiveness of teaching strategies and the need for more targeted interventions in order to promote the development of students’ writing competencies. In this context, we should not consider that the child presents any possible disorder; rather, the lack of



mastery of writing may be related to teaching quality, that is, properly organized and systematized teaching is capable of promoting the development of written language that is still in its initial stages.

### **The Teaching of Orthography in the Early Years of Elementary School from the Perspective of Historical-Cultural Theory**

When investigating the process of orthographic writing of words, we are confronted with large-scale assessments, such as the ANA, which are intertwined with public education policies proposed by the BNCC. It is important to emphasize that this type of assessment is grounded in the logic of quantifying results, without presenting proposals that ensure the social and pedagogical quality of teaching and learning. In contrast to this model of literacy, it is necessary to highlight another pedagogical stance, whose principles are grounded in Historical-Cultural Theory, according to which written language is a social tool that contributes to the formation of higher psychological functions such as memory, language, attention, thought, abstraction, and emotions.

[...] first, these are processes of mastering the external means of cultural development and thinking: language, writing, calculation, drawing; and, second, processes of development of special higher psychological functions, not limited or precisely determined, which in traditional psychology are called voluntary attention, logical memory, concept formation, etc. Taken together, both constitute what we conventionally qualify as processes of development of higher forms of the child's behavior" (Vygotski, 1995, p. 29).

From this perspective, we find the studies of Dangiό and Martins (2015), who emphasize that the appropriation of writing should be a didactic concern of teachers, who must be attentive to teaching by promoting situations that stimulate students' interest and development, taking into account the multiple relationships that students establish with written language, especially literature.

In the case of orthography teaching, emphasis is placed on students acquiring knowledge by relating oral language to written language, remembering that "[...] language is one of the most complex psychological functions and that its functioning is related to other functions, especially thought" (Dangiό; Martins,



2015, p. 211). Regarding written language, the authors clarify that such mastery requires from the subject a highly complex capacity for abstraction of the symbols that constitute the alphabetic system, arising from the development of thought, which goes beyond a learning mechanism centered on the acquisition of sounds and letter spelling, restricted to methods and techniques.

It is also necessary to add that written language is a human creation, essential to meet the need for recording social relations. If at first it served to describe commercial transactions, it later became an instrument to record the historical development of humanity; that is, “[...] the development of language emerges, from its origins, from the need for communication among human beings, a need arising from the fact that the actions of social beings are mutually intertwined” (Dangiό; Martins, 2015, p. 213).

According to the authors, writing allowed humanity to achieve major advances, “[...] having completely surpassed prehistoric forms of communication and inaugurated forms that reveal themselves to be increasingly elaborate and sophisticated, presenting highly complex qualities of cultural development” (Dangiό; Martins, 2015, p. 213).

The aforementioned authors also state that “[...] language expressed in writing, when appropriated by the child, produces a gigantic leap in their cultural development, bringing them multilaterally closer to human creations” (Dangiό; Martins, 2015, p. 213). Writing thus becomes an instrument of thought, contributing to the reorganization of psychological processes and requalifying higher psychological functions, thereby enriching the process of humanization.

Unlike the BNCC, from the perspective of the principles proposed by Historical-Cultural Theory, from the moment students come into contact with reading and writing, the need emerges to create new experiences and sensitivity toward thinking and doing—actions that contribute to the formation of objective conditions. Thus, it is possible to indicate that students’ cultural development is associated with the need to acquire knowledge of the world around them, a process that occurs through knowledge effectively formed



in thought, intertwined with language, resulting in increasingly required abstraction operations for the development of written language.

The child's insertion into culture is determined by the maturation of the corresponding apparatuses and functions. At a certain stage of biological development, the child masters language, if their brain and articulatory organs develop normally. At another, higher stage of development, the child masters decimal calculation and written language; some time later, fundamental arithmetic operations" (Vygotski, 1995, p. 41).

In this sense, according to Dangiό and Martins (2015, p. 217), "[...] writing requires the use of formal word meanings, must be explicit, and display maximum syntactic differentiation; that is, written language is complex, both in its phonemic and semantic structure." Thus, it can be stated that literacy goes beyond simply carrying out standardized activities, since the acquisition of reading and writing occurs as students interact and communicate with the world, assimilating historical-cultural experience.

In this regard, it becomes clear that "[...] language expressed in writing, when appropriated by the child, produces a gigantic leap in their cultural development, bringing them multilaterally closer to human creations and providing a means for formulating their ideas and thoughts" (Dangiό; Martins, 2015, p. 213).

With respect to writing tasks, teachers should organize them in such a way that students are not subordinated to the tasks, but rather develop through them, enriching their inner language. On this matter, Dangiό and Martins (2015, p. 216) state that

[...] writing presents itself as an important vehicle for communication and dissemination of ideas and thoughts, constructing an incalculable collection of knowledge historically produced by humanity to which everyone has the right of access. However, in order to access this symbolic heritage, it is necessary to appropriate written language and understand it in its structural and discursive aspects



Thus, when appropriating writing, individuals need to understand its meanings and know how to use it, since Brazilian Portuguese is broad and rich in synonyms. Dangiό and Martins (2015) emphasize that the dynamic between phonetics and semantics accompanies language development and that, in order to teach language expressed in writing, teachers must understand this process from its origin, that is, in oral language expressed through speech. It is also necessary to consider that the use of writing requires formal word meanings, clarity, and rigorous syntactic differentiation, recognizing that written language is complex both in its sound structure and in its meaning.

Unlike the BNCC, from the perspective of Historical-Cultural Theory, written language requires an understanding of word meanings, whose complex psychological acquisition is associated with the development of the psyche and not merely with motor practice. For Nunes and Silveira (2015), students in the process of development gradually apprehend content through their experiences; through interaction, they develop linguistic signs and reasoning as they engage with society. Thus, when guiding students in the acquisition of writing, it is necessary to teach “written language” rather than merely memorizing letters (Dangiό; Martins, 2015). Teachers should be concerned with how students interpret words, not merely with their mechanical recording.

According to Dangiό and Martins (2015, p. 219), processes inherent to “[...] perception, attention, memory, oral language, thought, imagination, and feelings are psychological functions that configure the whole from which written language is built [...]”. These functions are developed in and through the process of language appropriation in order to be requalified.

According to the authors, “[...] mastery of written language represents, for the child, mastery of a highly complex symbolic system and is highly dependent on the development of higher psychological functions throughout childhood development” (Dangiό; Martins, 2015, p. 218). For this reason, the psychological



functions developed in this process do not occur at a single moment; rather, they are strengthened in proportion to the quality of teaching provided to students in the appropriation of their symbolic universe.

### **Final considerations**

Throughout our investigation, we found that large-scale assessments, such as the ANA, are configured as instruments intended to guide the formulation of public education policies, showing little concern for the student within the school context. Instead, they focus on promoting competition among schools, which strive to present the highest learning indices.

With regard to the BNCC, we understand that it is a document that establishes national objectives and rules, as well as contents and skills that must be followed by teachers. Concerning these rules, we consider that they limit teachers' work, as they lack autonomy to adapt the curriculum according to local needs. Regarding the requirements for the development of competencies explicitly stated in the document, this action weakens teaching practice by emphasizing a mechanized form of instruction that prioritizes memorization and fragmented teaching. Although the BNCC is the learning document that teachers are required to follow, its emphasis privileges quantifiable results to the detriment of processes aimed at the integral formation of the subject, mediated by social and cultural relations. Based on ANA results, the school process becomes subordinated to pedagogical decisions embedded in the set of skills and competencies related to "knowing how to do."

With respect to the process of acquiring reading and writing, we observed that students will inevitably experience moments of error. However, as discussed throughout this study, we understand that errors are an integral part of students' developmental process. It also became evident that it is the teacher's responsibility to organize intentionally planned teaching practices in order to meet the learning needs observed throughout students' personal development. During the literacy process, students gradually appropriate



knowledge, as learning promotes development insofar as students experience study situations, thereby acquiring new knowledge.

Furthermore, we found that teachers are responsible for organizing meaningful tasks for students, which should gradually become more complex in order to promote the development of abstract thinking. Through this action, students move away from learning mechanisms that prioritize sound acquisition and letter spelling, as proposed by the methods and techniques of the BNCC. To achieve this, teachers must organize instructional practices that promote meaningful learning by engaging students in activities aimed at the appropriation of new knowledge, thus expanding their psychological development.

We therefore emphasize that literacy is not merely about enabling mastery of reading and writing; it goes beyond coding and decoding, as students must understand what they are reading and writing. Teachers, in turn, must have mastery and understanding of written language and be prepared to foster instrumental psychological development, considering that what thought comprehends can be expressed through the hands that write.

Finally, we understand that educators must value students' written production by presenting rules for the proposed skills and creating situations that enable students to appropriate the studied knowledge, with the objective of forming critical subjects who are distanced from the mechanized teaching that tends to prevail in most schools.

We hope that this study may contribute to the literacy and reading development process of many students, as well as support teachers who work



in this important role, by broadening their understanding of this theme, which remains highly challenging in contemporary educational contexts.

## References

BRASIL. Ministério da Educação. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. **MEC e Inep divulgam resultados do Censo Escolar 2023**. Brasília: Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira 2024a. Disponível em: <https://www.gov.br/inep/pt-br/centrais-de-conteudo/noticias/censo-escolar/mec-e-inep-divulgam-resultados-do-censo-escolar-2023>. Acesso em: 19 out. 2024

BRASIL. Ministério da Educação. Sistema de Avaliação da Educação Básica. **Relatório de resultados do SAEB 2021: 2º ano do Ensino Fundamental**. Brasília: MEC: INEP, 2024b. v. 2. Disponível em: [https://download.inep.gov.br/educacao\\_basica/saeb/2021/resultados/relatorio\\_de\\_resultados\\_do\\_saeb\\_2021\\_volume\\_2.pdf](https://download.inep.gov.br/educacao_basica/saeb/2021/resultados/relatorio_de_resultados_do_saeb_2021_volume_2.pdf). Acesso em: 25 jul. 2024.

**BRASIL. Ministério da Educação. Base Nacional Comum Curricular**. Brasília: Ministério da Educação, 2017. Disponível em: [https://www.gov.br/mec/pt-br/escola-em-tempo-integral/BNCC\\_EI\\_EF\\_110518\\_versaofinal.pdf](https://www.gov.br/mec/pt-br/escola-em-tempo-integral/BNCC_EI_EF_110518_versaofinal.pdf). Acesso em: 25 jul. 2024.

BRASIL. Ministério da Educação. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. **Relatório Saeb/Ana 2016 panorama do Brasil e dos estados**. Brasília: MEC: Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, 2018. Disponível em: [https://download.inep.gov.br/publicacoes/institucionais/avaliacoes\\_e\\_exames\\_da\\_educacao\\_basica/relatorio\\_saeb\\_ana\\_2016\\_panorama\\_do\\_brasil\\_e\\_dos\\_estados.pdf](https://download.inep.gov.br/publicacoes/institucionais/avaliacoes_e_exames_da_educacao_basica/relatorio_saeb_ana_2016_panorama_do_brasil_e_dos_estados.pdf). Acesso em: 13 out. 2024.

**CAMILO, Adelaide Maria Nunes**. A segmentação de palavras e o processo de aquisição de linguagem. *Signo*, Campinas, v. 38, n. 65, p. 4-21, 2013. DOI: <https://doi.org/10.17058/signo.v38i0.4173>.

**DANGIÓ, Meire dos Santos; MARTINS, Lígia Márcia**. A concepção históricocultural de alfabetização. *Germinal: Marxismo e Educação em Debate*, Salvador, v. 7, n. 1, p. 210-220, 2015. Disponível em: <https://periodicos.ufba.br/index.php/revistagerminal/article/view/13214/9533>. Acesso em: 11 out. 2024.



LURIA, Alexander Romanovich. O desenvolvimento da escrita na criança. In: VIGOTSKII, L. S.; LEONTIEV, A. N.; LURIA, A. R. Linguagem, desenvolvimento e aprendizagem. Tradução de Maria da Penha Villalobos. São Paulo: Ícone, 2006. p. 143-189.

NUNES, Ana Ignez Belém Lima; SILVEIRA, Rosemary do Nascimento. Psicologia da aprendizagem. 3. ed. rev. Fortaleza: UECE, 2015. Disponível em: [https://educapes.capes.gov.br/bitstream/capes/431616/2/Livro\\_Psicologia%20da%20Aprendizagem.pdf](https://educapes.capes.gov.br/bitstream/capes/431616/2/Livro_Psicologia%20da%20Aprendizagem.pdf). Acesso em: 17 ago. 2025.

GIL, Antonio Carlos. Como elaborar projetos de pesquisa. São Paulo: Atlas, 2002.

VYGOTSKI, Lev Semionovitch. Obras escolhidas. Madri: Visor, 1995. t. 3.

VIGOTSKI, Lev Semionovitch. A construção do pensamento e da linguagem. Tradução de Paulo Bezerra. São Paulo: Martins Fontes, 2000.

ZORZI, Jaime. **Aprender a escrever**: a apropriação do sistema ortográfico. Porto Alegre: Artes Médicas, 1998.

ZORZI, Jaime. **As letras falam: metodologia para alfabetização**. São Paulo: Phonics Editora, 2017. Disponível em: [https://www.phonicseditora.com.br/downloads/As\\_Letras\\_Falam\\_2a\\_edicao-manual-de-aplicacao\\_final.pdf](https://www.phonicseditora.com.br/downloads/As_Letras_Falam_2a_edicao-manual-de-aplicacao_final.pdf). Acesso em: 11 set. 2024.



### How to quote this article

FRANCIOLI, Fatima Aparecida de Souza; SILVA, Vanessa de Souza da. The orthographic writing of students in the literacy process. **Educação em Análise**, Londrina, v. 10, p. 1-28, 2025. DOI: <https://doi.org/10.5433/1984-7939.2025.v10.52890>.

Submitted on: April 29, 2025

Accepted on: October 6, 2025

Published on: December 18, 2025



#### CRediT

|                       |   |
|-----------------------|---|
| Acknowledgments       | Not applicable  |
| Funding:              | Not applicable  |
| Conflict of Interest: | The authors certify that they have no commercial or associative interests that represent a conflict of interest in relation to the manuscript.  |
| Ethical Approval:     | Not applicable  |
| Author Contributions: | <p>Francioli, F. A. L. declares to be the lead author and was responsible for supervision, writing review and editing, data curation, and validation.</p> <p>Silva, V. S. declares having contributed to investigation, methodology, writing the original draft, and formal analysis.</p> |

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This article was translated into English with the support of Gemini AI.

