COMPARATIVE STUDY OF LITERACY EFFECTIVENESS ON CHILDREN OF THE 1ST YEAR OF ELEMENTARY SCHOOL BY DIFFERENT METHODOLOGIES

https://doi.org/10.56238/sevened2024.041-043

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ABSTRACT

Reading and writing skills are indispensable for life in and out of schools in modern democratic societies. It is a basic human right that has often been denied. Quality literacy involves the search for teaching practices that are efficient and that promote better results in students' learning levels. In Brazil, in 2021, due to the Covid-19 pandemic, the number of children between 6 and 7 years old who could not read grew to 40.8%. Before the pandemic, there was already an urgent need to adapt learning processes to the real needs of children. The general objective of this study was to investigate the effectiveness of different literacy methodologies, including the Mouth® Method, based on the comparison of the performance of three groups of children attending the 1st year of Elementary School in public schools, in the skills verified in the New Mouth Surveys, in two stages. The results of the study showed significant variation in relation to the group and moment factors, and the experimental group that adopted the Boquinhas® methodology was the one that presented the most consistent results.

Keywords: Literacy. Method of the Little Mouths®. Neuroliteracy. Phonovisuoarticulatory method. New Mouthful Polls.

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INTRODUCTION

School learning is directly related to the development of the learner in its entirety. Thus, academic success depends on a series of elements that, in tune, can ensure satisfactory learning (Stein; Giacomoni; Fonseca, 2019). These authors state that genetic factors such as the child's neurological maturity, positive neuroplasticity, and psychic and neurodevelopmental health can be important predictors of learning. In addition to these domains, phonological awareness, auditory and visual processing, visuomotor coordination, processing speed, among others, should also be considered, which, when altered, can compromise cognitive processing leading to learning impairments (Jardini, 2012). Impairment in learning directly reflects on satisfactory academic performance, since for the reading and writing process to be carried out successfully, it needs the relationship of the multiple processes mentioned above, in an interdependent way (Seabra et al., 2014; Silva; Capellini, 2010). Jardini (2017) complements these ideas when he states that children are more open to growth as long as it is carried out in a harmonious and respectful way towards their individual differences.

Knowing how to read and write, according to Sargiani (2022), may seem like a simple and trivial task for people who already have mastered these skills. Dehaene (2018) states that learning to read is not carried out smoothly, and that regardless of the language, there are difficulties in this process. Therefore, it is essential that children can learn to read and write with autonomy, proficiency, and pleasure (Sargiani, 2022).

Melo, Souza and Fonseca (2019) agree with the aforementioned authors when they state that encoding and decoding mechanically is not enough, it is necessary to go further. The authors also argue that seeking new practices and methods is trying to change the reality of education that is currently lived, and it is essential to innovate, to get out of what is repeated mechanically, without reflection, because it is noticeable that many literacy methods used in Brazil are not meeting the needs of students. They see the Method of Little Mouths®, as shown by the research, as a new ally in the construction of a conscious literacy, in which the student will truly consolidate reading and writing, not merely coding/decoding. The Method of Little Mouths® can be a good practice in literacy, as the learner is the active agent of the teaching process (Melo; Souza; Fonseca, 2019).

Due to the Covid-19 pandemic, in Brazil, in 2021 the number of children between 6 and 7 years old who could not read grew to 40.8% (Todos pela Educação, 2021). Before the pandemic, there was already an urgent need to adapt learning processes to the real needs of children. Rotta, Ohlweiler and Riesgo (2016) also point out that in order for the specific learning of reading and writing, the learner must acquire and develop cognitive-linguistic

aspects that allow him to appropriate the learning of the alphabetic principle. Preliminary reading and writing skills involve the ability to recognize the letters and sounds of the alphabet and the ability to encode and decode letters, syllables, or single words. Evidence suggests that its acquisition is determinant for subsequent academic success throughout basic education, reiterating the importance of early assessment (Pazeto; León; Seabra, 2017).

With the multisensory approach to literacy, the authors seek to combine different sensory modalities in the teaching of written language to children, establishing connections between visual aspects (the orthographic form of the letter or word), auditory aspects (the phonological form), tactile and kinesthetic aspects of spelling (the movements necessary to write letters and words) and kinesthetic aspects of articulation (the movements and positions necessary to pronounce sounds and words). words), the teaching of reading tends to respect the individual differences of children and meet their needs in the school context, leading the processes involved in learning to their objective (Seabra; Dias, 2011)

The Phonovisuoarticulatory Method, affectionately called the Litte Mouth® Method, used in this study is an example of a multisensory method, which uses phonic (phoneme/sound), visual (grapheme/letter) and articulatory (articule/Boquinhas) strategies for the teaching of reading and writing. This methodology is based on the partnership between Speech Therapy and Pedagogy and is indicated to teach any children to read and write and also mediate/rehabilitate the difficulties and disorders of reading and writing (Jardini, 2017).

The Little Mouth® Method guides its mediations based on the results of the New Mouth Surveys (Blanco, Campos, Hoffmeister and Jardini, 2020), a protocol that adds to the content of the BNCC (BRASIL, 2012) the precursor skills of reading and writing already discussed above. As a result, she introduced in the first year of Elementary School Survey used in this study, tasks that allow the investigation not only of the writing phase, but also of phonological awareness (rhymes and phonemic awareness), phonoarticulatory, reading comprehension of words and sentences, the quality of writing of words and sentences (Blanco, Campos, Hoffmeister and Jardini, 2020). However, many schools disregard the skills recommended as essential for literacy and may not realize that the slowness and difficulties in this process are also linked to the lack of training and construction of phonological awareness and phonoarticulatory instruction for the mastery of graphophonemic and phonographemic conversion. In view of this, the following question arose: to what extent can different literacy methodologies accelerate and improve children's performance based on the items evaluated in the New Mouth Surveys?

The implementation of this project is justified by the urgent need to reverse the alarming rates of illiteracy and learning difficulties, providing children with the necessary tools for the development of essential skills and ensuring a more promising educational future. In addition, the possible theoretical contributions of this work include the expansion of knowledge about the effectiveness of multisensory methodologies in literacy, especially in the Brazilian context, where gaps in teacher training and pedagogical practices are still significant.

In short, by addressing both theoretical and practical aspects, this project not only aims to improve students' performance in reading and writing, but also to contribute to the construction of a more inclusive educational environment, where each child can learn in a meaningful way and reach their full potential.

The general objective of this study was to investigate the effectiveness of different literacy methodologies, including the Little Mouth® Method, based on the comparison of the performance of three groups of children attending the 1st year of Elementary School in public schools, in the skills verified in the New Mouth Surveys, in two stages.

THEORETICAL FRAMEWORK

Writing, a historical invention of humanity, is one of the fundamental pillars of human communication and its history dates back to the dawn of civilization. Archaeological evidence suggests that writing arose independently in different parts of the world, with the development of systems of symbols or characters to represent spoken language.

One of the most recognized scholars of writing systems and their origins, Florian Coulmas (1989), explains that the use of pictograms with phonetic value was a fundamental milestone in the development of writing. According to the author, it is the process of phonetization (or sonorization), which expresses the transition from the pictographic icon to the symbol with phonetic meaning, that is, the sounds of the words would necessarily be linked to a symbol. He also explains that by privileging the importance of sound in the spoken word, the writing system allowed the complete representation of verbalized thought. The relationship between symbol and sound no longer depends exclusively on an external reference, as it has become feasible to understand a character only by its sound value, giving rise to the phonetic principle or rebus principle. Previously, to write words such as "soldier", the combination of the drawings of a SUN and a DUM was used.

The conception of the rebus principle was fundamental for the development of alphabetic writing, which is phonetized and in which symbols are read according to their sound value, within a limited set of characters in a standardized system of sound

representation. Gradually, the alphabetic writing system emerged, whose initial learning demands an understanding of the alphabetic principle (Coulmas, 1989). Literacy can be defined as the process of learning the alphabetic system and its conventions, that is, the learning of a system that represents the phonemes of speech through graphemes (Soares; Cardoso-Martins; Batista, 2005; Morais, 2012).

From this conception, many theories have been presented for the teaching of the skills necessary to develop reading and writing, which when absent, the result is school failure that ends up perpetuating with the advancement of students to Elementary School II, High School and even universities and colleges.

School failure is a pertinent problem with which the Brazilian educational reality has been living for many years, at all levels of education. Literacy students are the most affected in relation to effective learning. Such difficulties may be a consequence of an inefficient literacy methodology or lack of knowledge of the structure of the alphabetic writing system in Portuguese, hindering the adequate development of the orality/written relationship.

MOUTHFUL ARTICULATORY PHONOVISUOARTICULATORY METHOD MOUTHS® AND MOUTHS POLLS

The Mouth® Method is used in many Brazilian municipalities and in other countries such as Mozambique and Portugal, with excellent results. It is committed to establishing a bridge between the phonic elements essential to the reading and writing process, made possible by a "mouth" that concretizes them, favoring beginners in this process, the mastery of the writing system, in a harmonious, playful and inclusive way.

Nowadays, it is observed that children have been inserted earlier and earlier in the process of formal learning of reading and writing. Many successfully perform the numerous activities demanded, but others are unable to meet the demands of the educational system, even with typical development, since they have a neurological system still in the maturation process (Silva; Capellini, 2022). At this point, the important thing is to probe which skills this child has already acquired and which still need to be stimulated.

The indicators of the success of the use of the Mouth® Method can be verified by users through the application of the New Little eMouth Surveys, developed by the author herself and multipliers, and which contemplate the objectives indicated by the BNCC in Early Childhood Education (4 and 5 years old) to the 5th year of Elementary School. In the case of this research, the 1st Year Survey was used, which portrays the performance of learners in the various cognitive modalities involved in the knowledge of SEA, such as their

hypotheses of writing, reading of words and sentences, notion of rhyme, phonoarticulatory awareness, graphophonemic correspondence and phonemic awareness of vowels (Blanco; Fields; Hoffmeister; Jardini, 2020). According to the authors, the Mouth Surveys are used to get to know the student, aiming to adapt and plan the activities to be offered for their growth and consolidation of learning. They also point out that the items listed in the questions in each survey are investigated and not evaluated in a formal and scientific way, through tests. Probing is not testing, but screening in order to know the abilities and weaknesses of children. The New Boquinhas Polls do not have the character of qualifying or quantifying students as apt or not with paths of academic approval and are not considered or replace the regular tests to be applied for this purpose. It is an instrument that the authors developed, published in their own book (Blanco; Fields; Hoffmeister; Jardini, 2020), so that teachers can better know the performance of students in each item evaluated, with ways to support, with greater security, their individual and collective daily planning.

Hoffmeister (2020) developed and applied a Phonological Speech Articulatory Intervention Program in children with dyslexia and the results suggested that the speech articulatory intervention allowed gains in reading accuracy and speed, text comprehension and phonological skills when compared to the phonological awareness intervention alone or the usual environmental stimuli (controls).

Rangel (2023) verified in his study the practicality of applying the Boquinhas Surveys as well as the effectiveness of an intervention plan based on the results obtained. He also suggested that the success of the results was achieved with the Mouth® Method, confirming the efficiency of a good poll and adequate methodology.

In Chart 1 we see correlated the objectives of the New 1st year EF Surveys with the competencies of the BNCC.

Table 1 – Correlation of the objectives of the New Boquinhas Surveys and codes of the BNCC competencies.

Elementary School – 1 year	
Objectives of the Surveys	**BNCC Codes**
Writing hypothesis, quality of the tracing, knowledge and use of letters	(EF01LP02, EF01LP05)
Reading comprehension of words	(EF01LP05, EF01LP09, EF01LP13, EF12LP01)
Phonological and phonemic awareness of rhymes	(EF01LP13)
Phonological awareness by alliteration of the first letter, phonoarticulatory awareness and phonographemic association	(EF01LP05, EF01LP07, EF01LP08)
Phonemic awareness of the sequence of vowels in words	(EF01LP06, EF01LP08)
Sentence reading comprehension	(EF15LP18, EF01LP03)
Sentence writing	(EF01LP02, EF01LP05)

Source: CANOAS-ANDRADE, 2023

METHODOLOGY

This study was submitted for approval by an Ethics Committee of the Pontifical Catholic University of Minas Gerais (PUC MINAS) and accepted under CAAE opinion No. 71089523.1.0000.5137. All teachers and principals signed an ICF (Term of Free and Informed Agreement), with the clarifications of the research and the researchers signed a TCUD (Commitment Term of Data Use). The parents/guardians of the students did not sign the Informed Consent Form for their dependents because the object of the research took into account a regular performance survey applied in each classroom, being part of the work schedule and lesson plan of each teacher. Thus, minors also did not need to sign the Term of Free and Informed Assent (TALE). All teachers in the study received instructions on how to apply the New Boquinhas Survey of the 1st year of EF online, with a duration of 1 hour of training by the researchers of this study.

A total of 270 children participated in this study, 131 (48.51%) boys and 139 girls (51.48%), all regular students in the 1st year of PE classes, from 3 Brazilian municipalities in the State of Minas Gerais, which constituted 3 study groups. The results of children who had a report involving learning disorders were not counted for inclusion in the data studied, in order to avoid interpretation biases.

The control group (CG) consisted of 130 children and their teachers who did not use or know the Mouth® Method and who used the global literacy methodology. Experimental Group 1 (EG1) was composed of 65 children in whom their teachers had taken an 8-hour course on the Mouth® Method in the previous year, but did not use it fully in their literacy process, mixing it with other methodologies, which we will call a mixed methodology for this study. The third group, experimental (EG2) was made up of 75 children in whom their teachers received, in the previous year, an initial training of 8 hours of the Method of Little Mouth®, continuing in a 40-hour Advisory, using authentic materials of Mouths® in the classroom, which we will call the Little Mouth® phonoarticulatory methodology.

The New Mouth Surveys were applied by the teachers, collectively in the classroom, in about 50 minutes. The researchers tabulated the results that were subjected to statistical analysis.

The same surveys were reapplied to the same students by the same teachers, in two collection times, in March and June, with an interval of 3 months between them. All data were analyzed, even those of children who failed to answer any question, either due to refusal or lack of knowledge.

It was advised that during the research the teachers should keep their schedules and class activities regular, without any interference or guidance from the researchers regarding

the methodology used in the classroom, so that the results would be real and reliable. At the end of the research, all the teachers involved and their directors/coordinators received a training with a workload of 9 hours, on the theme Mouth Surveys, taught by the author, online. Table 1 presents the data of the participants.

Table 1 – Description of the Groups participating in the study

Group	Description	N of classes	N	Female	Male
Control (GC)	Schools with teachers who do not know and do not use the Mouth® Method	7	130	66	64
Experimental 1 (GE1)	Schools with teachers who have already taken the basic training of the Method of Little Mouths® and who do not adopt the methodology	5	75	35	40
Experimental 2 (GE2)	Schools with teachers who have trained in the Mouth® Method adopt the methodology and use authentic materials.	6	65	38	27

Source: Authors' data

RESULTS AND DISCUSSIONS

The data were analyzed by the researchers through pertinent statistical analyses and discussed in the light of the current literature. To verify the normality of the data, the Shapiro-Wilk test was used, and for the homogeneity of the variances, the Levene test was used. Mean and standard deviation were used to present the data. To identify possible differences between the groups (control, experimental 1 and experimental 2) and time (pre and post-intervention), the two-way ANOVA of repeated measures was used. To estimate the size of the effect, the partial squared eta (ηp^2) was used. The following effect size classification was used: small (0.01 to 0.09), moderate (0.09 to 0.25), and large (≥0.25) (Field, 2013).

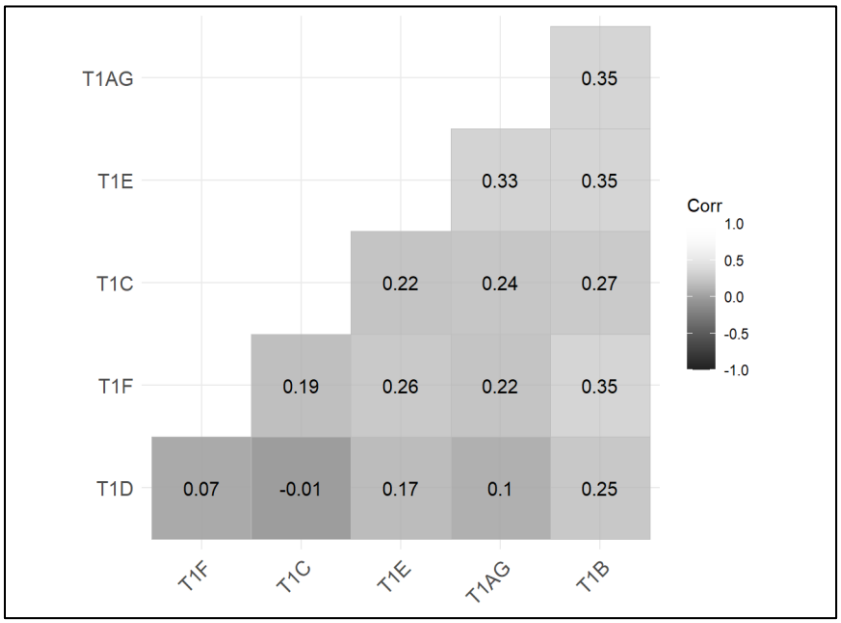
Confirmatory Factor Analysis (CFA) was used to assess the construct validity of the evaluation method using the weighted least squares estimator (WLS) due to the ordinal nature of the scale (e.g., a scale of less than seven points) (Chen; Yang; Morin, 2015).

A series of indices were used to assess how well the data fit the proposed model. These indices include the chi-square value and the corresponding p-value, the relative chi-square statistic, the mean square error of approximation (RMSEA), the comparative fit index (CFI), and the Tucker-Lewis Index (TLI). As a criterion adopted to evaluate how well the proposed model fits the data, we used the RMSEA value of 0.08 or lower, which indicates that the model can be considered adequate to fit the data. A CFI and TLI with a value

greater than or equal to 0.90 can be considered to adequately fit the data (Brown, 2006; Kline, 2011).

The model adjustment measures in the original proposal indicated acceptable adequacy indices (CFI = 1.00; TLI = 1.41; RMSEA < 0.001; χ^2 = 4.28 and gl = 9; p = 0.892). In addition, the value of Cronbach's alpha was equal to 0.61 (95% CI 0.60-0.71), as shown in Table 2.

Table 2: Correlation results between the items



Source: Authors' data

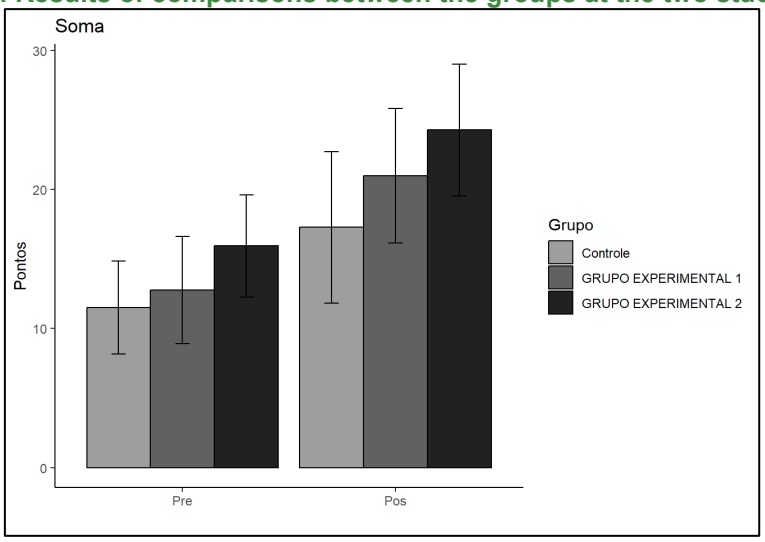
In the results of the Analysis of Variance (ANOVA), significant effects were observed for both the Group and the Moment factors, in addition to a significant interaction between these two factors. Specifically, the Group effect was significant (p < 0.001), with an effect size of 0.274. The Momentum effect was also significant (p < 0.001), with an effect size of 0.718. The Group: Moment interaction was also significant (p < 0.001), with an effect size of 0.072. This means that the 3 Study Groups were statistically different, allowing them to be studied indistinctly. The same was true for the Moment factor, showing that the data are representative of two times separately.

In the *post hoc* analysis of the interaction using Tukey's test, significant differences were observed at the pre-intervention moment. Comparisons between the groups showed no significant differences between the Control group and Experimental Group 1 (p = 0.131), while they identified differences between the Control group and Experimental Group 2 (p < 0.001) and Experimental Groups 1 and 2 (p < 0.001). This means that in the pre-intervention moment, the CG and EG1 groups were equal in relation to the performance of their children, that is, the use of a global methodology (CG) and the use of a mixed

methodology (EG1) did not show signs of statistically significant differences. And both performances were below GE2, of Boquinhas methodology.

In the post-intervention, significant differences were found between all comparisons ($p < 0.001$). This means that the work with a multisensory methodology such as Boquinhas (EG2) brought higher gains to the students' performance, when statistically analyzed in relation to the use of the global (CG) and mixed (EG1) methodology, as shown in Graph 1.

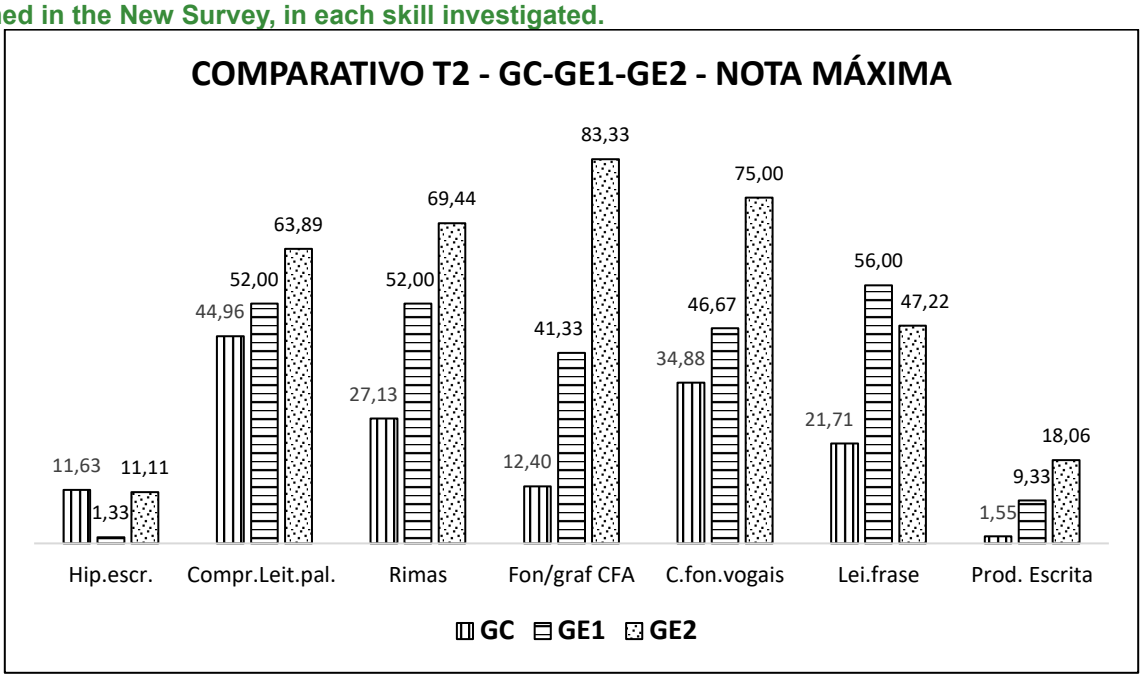
Graph 1: Results of comparisons between the groups at the two study times



Source: authors' data

For the analysis of each specific skill, simple studies were carried out, based on the percentages of the means of the maximum scores at time 2, post-intervention. In 5 of the 7 skills investigated, EG2 showed a much higher learning performance (maximum score) than the other groups. In the writing hypothesis ability, the CG showed equivalent evolution than the EG2. In the ability to read sentences, EG1 outperformed the other groups. In the 3 groups, the skills that still need to be better worked on are the hypothesis of writing and written production, which is expected due to the short time of mediation work. These results are presented in Graph 2.

Graph 2: Presentation of the comparison between the 3 groups according to the maximum score obtained in the New Survey, in each skill investigated.



Source: Authors' data

Other authors have reported the success of the use of the Little Mouth® Method in their professional practice (Gitt; Gitti, 2021; Melo; Souza; Fonseca, 2019; Fonseca, Jar-dini; Paula, 2018). Gitt and Gitti (2021) reported the use of the Mouth® Method with a child with Autism Spectrum Disorder, in a regular classroom, in which everyone was taught to read and write with the same methodology, confirming the inclusive possibility of the methodology. The authors stated that the child not only acquired linguistic skills but also became part of the group in the academic context, since it was the first time they shared the same knowledge, proving that it was an effective and inclusive methodology.

In this study, the data of the children with a report were not included for analysis, in order to avoid interpretation biases, however, informal reports from the teachers of the EG2 indicated that even the children who received the report showed advances in their literacy. It is notorious the national recognition that the use of a phonovisuoarticulatory methodology, such as the Method of Mouths®, brings benefits to its users, both neurotypical and atypical. In fact, the Little Mouth methodology itself was initially idealized for clinical intervention, starting to be used only in regular classrooms, for all children, at the initiative of teachers, who saw its benefits in a short period of time and as a facilitator of teaching/learning, since all students shared the same literacy proposal.

Fonseca et al (2018) presented the effectiveness of Little Mouth, used in daily work at school, as a methodology that provides security and directs educators to apply the activities. They also reported that the method offers benefits to all involved, students with good results in literacy, responding to family desires and the teaching staff as a whole.

The results of this current study corroborate these findings, since they signal significant differences in relation to the 3 groups, with EG2, which adopted the methodology, being the one with the highest performance.

To succeed in a process, it is necessary to be clear about the goal to be achieved, planning the steps to follow, and adequate procedures to achieve it. The need for an effective literacy method that transforms reality by serving teachers and students is evidenced, so that the results in education do not happen randomly, but within the intentionality and as planned by the educator (Paula, 2023). The results of the current study, in which EG2 surpassed the performance of EG1, point out that the adoption of a single work methodology, based on the author's premises, with its authentic materials, makes a difference, when compared to the use of mixed methods, in which the proposed theoretical foundation is dissolved, through adaptations and insertions, which, many times, contribute more to the (un)learning, both of teachers and students.

Traditional and multisensory methods differ in relation to the sensory modalities actively and intentionally engaged in the literacy process. In the traditional method, written language is taught mainly using sight (the student sees the written item) and hearing (the student hears his oral counterpart), while multisensory methods provide greater engagement and are more explicit than other sensory modalities, bringing more effectiveness in learning (Seabra; Dias 2011). This was very evident in the present study, in which the learning efficacy of experimental groups 1 and 2 surpassed the control group, with better performance in EG2, with a pure and authentic phonovisuoarticulatory multisensory approach.

It is discussed that the better performance of the ability to read sentences in EG1 in relation to the other groups, presented in graph 2, is discrepant from the other results. It can be inferred, in this case, that the Survey used in this study contained the association between only 3 sentences and 4 representative images, which can often give rise to false positives due to interpretation biases, as some children can obtain maximum marks in the question by reading only some elements of the sentence and associating them with the images. This interpretation is corroborated by the writing hypothesis of this EG1, which obtained the worst performance of the 3 groups studied.

Many studies indicate that it is necessary for children to understand the grapheme-phoneme relationship, being able to use speech segments as a requirement for the acquisition of writing (Moraes, 2012; Alves, 2012; Capovila and Capovila, 2012; Dehaene, 2015). However, according to Blanco (2023), apparently the greatest difficulty is to make the student reach this level of understanding, especially because traditional methods do not

take into account the other variables involved in this process, especially the grapheme-phoneme relationship.

Jardini (2017) argues that all metalinguistic activity should be carried out in a reflective, intentional way, as opposed to epilinguistic activity, which would be to do it automatically, not consciously. It is known that phonological awareness is a sub-ability of metalinguistic awareness, that is, becoming sensitive to the sound chain of speech, and this sub-skill, in turn, has subdivisions such as word awareness (lexical awareness), syllabic awareness (ability to perceive syllables in words), awareness of intrasyllabic elements (rhymes and alliterations) and phonemic awareness (of each phoneme, individually).

In the Little Mouth methodology, it is seen that each of these instances are worked consciously and deliberately, through constructive error, in which error and success conflict, making the child correct by acquisition and use of the concept worked and not only by memorization or chance. We saw this finding in the better performance of EG2 in relation to the other groups in all these phonological awareness sub-skills analyzed, as shown in graph 2 (rhymes, phonographemic relationship and phonemic awareness of vowels in words).

CONCLUSION

In recent decades, the literacy process has become the object of study of numerous researches, being investigated by different methodological strands and theoretical assumptions, thus evidencing possibilities for interdisciplinary dialogues.

Without the teacher being aware of the individual and collective performance of his students, he will not be able to carry out a pedagogical project based on the real needs of his learning. The instrument used in this study, New Mouth Surveys, proved to be one of the ways to investigate the abilities of each student, as well as the class, in a fast, controlled and practical way, favoring future mediations. In addition to other materials and children's productions, the teacher can glimpse and compare the effectiveness of his planning and readjust it according to the outdated areas.

Returning to the central question of this research, which sought to investigate how different literacy methodologies can accelerate and improve children's performance, based on the items evaluated in the New Mouth Surveys, it is highlighted that the Little Mouth® Method can significantly accelerate and improve children's performance when compared to other methodologies. Little Mouth® stood out for its multisensory approach, which integrates phonetic, visual and articulatory aspects, allowing children to develop essential reading and writing skills more effectively. It is believed that these results were due to the scientific evidence of this methodology, the response to the controlled intervention in the

advice received and authentic and validated practices, accepted throughout the national territory, as they focus on the linguistic aspects of literacy, obviously not disregarding the social and contextual counterpart necessary to the reading and writing process.

Thus, it is reiterated that multisensory methodologies, such as the one presented in this study, can collaborate with the consolidation of literacy in a faster and more consistent way, bringing effectiveness and gains in student achievement rates, reflecting, in the same way, on the self-esteem of their teachers, being able to plan their activities within simple and reliable metrics, replicable throughout the network.

The results obtained in this research have the potential to generate significant contributions to both society and academia. In the social context, the identification of the Little Mouth® Method as an effective approach to literacy in the 1st year of elementary school can directly impact educational practices in schools. As this methodology becomes more widely adopted, literacy rates are likely to improve significantly, providing children with a solid foundation for their academic and personal development. An increase in literacy rates not only benefits individual learners but also strengthens society as a whole by promoting a more educated population that is able to actively participate in community and economic life. In addition, strengthening the self-esteem of teachers, who feel more confident and empowered to plan and implement teaching activities, can result in a more positive and motivating school environment, reflecting on the quality of education offered.

For academia, the survey results offer a solid foundation for advancing knowledge about literacy methodologies, especially with regard to the integration of multisensory approaches. The theoretical basis of the Little Mouth® Method, addressed in other researches, in comparison to traditional and mixed methods enriches the academic literature and opens space for new investigations. In addition, the validation of tools such as the New Mouth® Surveys presents a practical and effective resource for researchers and educators, which can be used in future investigations and as a reference in teacher training.

Through the dissemination of results and recommended practices, it is hoped that educational institutions, public policies and continuing education programs for teachers can benefit, creating a virtuous cycle of continuous improvement in literacy. Thus, research not only contributes to the improvement of pedagogical practices, but also to the formation of more critical and participatory citizens, strengthening the social and educational fabric of the country.

Among the limitations of this research, the restricted sample in terms of the regions studied is highlighted, which limits the generalization of the results to different contexts and educational realities. For future research, it is suggested to expand the diversity of schools,

regions and socioeconomic profiles of students in order to provide a more comprehensive view of the effectiveness of the Little Mouth® Method.

THANKS

We would like to express our sincere gratitude to the schools that participated in our research project. Without the collaboration and support of these educational institutions, this study would not have been possible. Dedication, involvement and willingness to contribute to our work were fundamental to the success of this research.

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