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Phonological performance of a group of brazilian children attending bilingual school

Desempenho fonológico de um grupo de crianças brasileiras que frequentam escola bilíngue

Rendimiento fonológico de un grupo de niños brasileños que asisten a una escuela bilingüe

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Abstract

Introduction: Childhood bilingualism has been widely investigated regarding its associations with linguistic development, particularly phonological awareness and production. Research indicates that simultaneous exposure to two languages does not hinder speech development and may enhance metalinguistic and phonological skills, although results vary depending on factors such as age and educational context. **Objective:** To comparatively analyze the phonological performance of Brazilian children aged 3;3 to 6;0 years enrolled in bilingual and monolingual schools. **Method:** A quantitative, exploratory study was conducted with 120 children enrolled in bilingual schools (Research Group, RG) and 51 children enrolled in monolingual schools (Control Group, CG). All participants were children of native Brazilian Portuguese-speaking parents. Phonological performance was assessed using the Phonology subtest of the ABFW. **Results:** Children from bilingual schools showed a lower probability of phonological deviations than those from monolingual schools. Liquid simplification was the most frequent process. Monolingual children were more likely to present two or more altered phonological processes in both naming and imitation tasks, indicating a significant association between school type

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and the presence of deviations. **Conclusion:** In this population, simultaneous bilingual exposure in a context consistent with the native language was not associated with adverse outcomes in the phonological acquisition of Portuguese.

Keywords: Multilingualism; Speech Assessment; Child Development; Child Language; Language Development.

Resumo

Introdução: O bilinguismo na infância tem sido amplamente investigado quanto aos seus efeitos no desenvolvimento linguístico, especialmente na consciência e produção fonológica. Estudos indicam que a exposição simultânea a duas línguas não compromete o desenvolvimento da fala, podendo inclusive favorecer habilidades metalinguísticas e fonológicas, embora resultados variem conforme fatores como idade e contexto educacional. **Objetivo**: Analisar comparativamente o desempenho fonológico de crianças brasileiras, na faixa etária de 3;3 a 6;0 anos, que frequentam escola bilíngue. **Método**: Pesquisa de natureza quantitativa, desenvolvida por meio de estudo exploratório. Participaram 120 crianças brasileiras, filhas de pais brasileiros falantes de português, matriculadas em escola bilíngue (Grupo Pesquisa – GP), e 51 crianças brasileiras de escola monolíngue (Grupo Controle – GC). Os participantes foram avaliados individualmente por meio do instrumento de avaliação da Fonologia do Teste ABFW. **Resultados**: Crianças de escolas bilíngues apresentaram menor prevalência de alterações fonológicas em comparação às de escolas monolíngues. A "simplificação de líquidas" foi o processo fonológico mais frequente. Crianças do grupo monolíngue demonstraram maior probabilidade de apresentar dois ou mais processos fonológicos alterados na nomeação e imitação, indicando associação significativa entre tipo de escola e presença de alterações. **Conclusão**: Na população estudada, a aquisição simultânea de duas línguas por crianças brasileiras em ambiente linguístico compatível com sua língua materna não esteve associada a prejuízos na aquisição fonológica do português.

Palavras-chave: Multilinguismo; Avaliação; Desenvolvimento Infantil; Linguagem Infantil; Desenvolvimento da Linguagem.

Resumen

Introducción: El bilingüismo en la infancia ha sido ampliamente estudiado en relación con su impacto en el desarrollo lingüístico, especialmente en la conciencia y producción fonológica. Las investigaciones indican que la exposición simultánea a dos lenguas no perjudica el desarrollo del habla y puede incluso favorecer habilidades metalingüísticas y fonológicas, aunque los resultados varían según factores como la edad y el contexto educativo. **Objetivo:** Analizar comparativamente el desempeño fonológico de niños brasileños, entre 3;3 y 6;0 años, que asisten a escuelas bilingües. **Método:** Estudio exploratorio de naturaleza cuantitativa. Participaron 120 niños brasileños, hijos de padres hablantes de portugués, matriculados en escuelas bilingües (Grupo de Investigación – GI), y 51 niños brasileños que asisten a escuelas monolingües (Grupo Control – GC). Los participantes fueron evaluados individualmente mediante el subtest de Fonología del test ABFW. **Resultados:** Los niños de escuelas bilingües presentaron menor prevalencia de alteraciones fonológicas en comparación con los de escuelas monolingües. El proceso fonológico más frecuente fue la "simplificación de líquidas". Los niños del grupo monolingüe mostraron mayor probabilidad de presentar dos o más procesos fonológicos alterados en tareas de denominación e imitación, lo que indica una asociación significativa entre el tipo de escuela y la presencia de alteraciones. **Conclusión:** En la población estudiada, la adquisición simultánea de dos lenguas por parte de niños brasileños en un entorno lingüístico compatible con su lengua materna no perjudicó la adquisición fonológica del portugués.

Palabras clave: Multilingüismo; Evaluación; Desarrollo infantil; Lenguaje infantil; Desarrollo del lenguaje.

Introduction

Childhood bilingualism has been extensively investigated in studies addressing brain, cognitive, and linguistic aspects, including its associations with lexical, phonological, and reading development in children[1,2,3].

With regard to phonology, research suggests that exposure to two languages can influence both perceptual abilities and phonological production. However, there is no evidence that such exposure hinders speech development or reduces vocabulary, which contradicts widely disseminated myths[3,4,5,6]. On the contrary, bilingual children tend to show greater phonological awareness and metalinguistic skills, deriving cognitive benefits from this experience[4,5,7].

The development of phonological awareness is an essential component of literacy, particularly in bilingual contexts. Although different languages present distinct phonological structures, recent studies indicate that children simultaneously exposed to two languages show age-appropriate phonological development. Evidence also suggests that targeted and contextualized interventions can enhance these abilities, thereby supporting the linguistic performance of bilingual children[18,20].

An integrative literature[8] review identified ongoing controversies regarding the impact of bilingualism on phonological awareness. The authors emphasized that factors such as age of acquisition and the relative amount of exposure to each language account for a substantial portion of the variability in these skills.

Studies with Brazilian children enrolled in bilingual and monolingual schools have shown that the second language can affect both perceptual abilities and phonological production. One investigation of word-naming performance in Brazilian preschoolers found that bilingual children adopt different strategies to designate familiar words[9].

A study involving children aged 3–6 years compared the phonological performance of two groups: those attending monolingual schools and those attending bilingual schools. The results indicated similar performance in phonological tests in Portuguese; however, in phonological awareness tasks, the monolingual group performed enhanced[11].

Researchers[12] who examined 5-year-old bilingual children exposed to Portuguese and English during language acquisition concluded that simultaneous learning does not impair the phonological development of Brazilian Portuguese, nor are there significant differences between boys and girls. Another study highlighted that early exposure to bilingualism can benefit phonological awareness and cognitive flexibility, thereby promoting metalinguistic skills[13].

Cross-linguistic transfer of phonological awareness skills between the native language and an additional language is a widely documented phenomenon. Recent data indicate that a well-structured phonological development in one language facilitates the acquisition of these skills in the other, supporting theoretical models of transfer facilitation. These findings reinforce the need for systematic bilingual and multilingual educational practices to promote balanced bilingual literacy[22].

In light of this background, the present study aims to comparatively analyze the phonological performance of Brazilian children aged 3;3 to 6;0 years enrolled in bilingual and monolingual schools.

Method

This project was approved by the Research Ethics Committee of the higher education institution where it was conducted. The identities of students and schools were protected, and potential risks were minimized in accordance with the informed consent procedures signed by parents or guardians (research protocol no. 037.80512.4.0000.5482).

A total of 120 Brazilian children of both sexes, aged 3;3 to 6;0 years and enrolled in bilingual schools, composed the research group (RG), and 51 Brazilian children attending monolingual schools composed the control group (CG).

Inclusion criteria were:

- Brazilian children of native Brazilian Portuguese-speaking parents, of both sexes, children aged 3 to 6 years, and attending bilingual or monolingual schools. This age range was selected because it encompasses the typical period of acquisition of oral language in childhood.
- Authorization from parents and/or the educational institution, by signing the informed consent form, for the children to participate in the study.

Exclusion criteria were:

- Children with a diagnosis or under diagnostic investigation of neurological conditions, developmental disorders, language disorders, and/or genetic syndromes.

Procedure

In bilingual institutions, data collection took place in a regular Brazilian school that offered instruction in both Portuguese and English. Upon entering the school, children began an English-language immersion program, and their daily routine was organized so that English was the language predominantly used in the classroom. Portuguese was present at this stage only in specific subjects, such as physical education and music. In elementary school, students followed the full Brazilian curriculum in Portuguese and, in the opposite shift, the English curriculum, which covered all skills required for learning English (reading, writing, and oral comprehension and production). The school day lasted 4 hours for children up to 4;0 years, and became full-time from 5;0 years onward (from 8:00 a.m. to 3:30 p.m.).

In the monolingual institution, English was offered as one of the curricular subjects. Children remained at school for 4 hours a day up to 4;0 years of age, and from 5;0 years there was the option of full-time attendance.

Children in the RG and CG were individually assessed by the researcher in a reserved classroom within the school setting. Phonology was evaluated using the Phonology subtest of the ABFW Child Language Test. All procedures were video recorded to allow subsequent transcription of the data.

The instrument comprises two tasks: imitation and naming. In the imitation task, the child is asked to repeat 39 words after a model provided by the examiner. In the naming task, the child must name 34 pictures presented by the examiner. The test allows:

- systematization of the child's phonetic inventory according to the syllabic position (word-initial and word-final) of the phoneme;
- description and analysis of the phonological processes used by the child.

Data were recorded on the specific scoring sheets for each child. Next, phonetic transcription was carried out and the phonological processes used by each participant were classified.

The following phonological processes were analyzed: syllable reduction, consonant harmony, stopping of fricatives, backing to velars, backing to palatals, fronting of velars, fronting of palatals, liquid simplification, cluster reduction, final consonant deletion, voicing of plosives, voicing of fricatives, devoicing of plosives, and devoicing of fricatives.

The analysis of phonological processes followed the criteria established by the instrument: only processes occurring in at least 25% of opportunities in each task (imitation and naming) were considered. Age-appropriate phonological processes were excluded (0%).

For each task, the Percentage of Consonants Correct (PCC)[14] was then calculated. Consonants were classified as correct or incorrect according to the authors' criteria. Only the consonants corresponding to the child's first production attempt were considered correct, and syllable repetitions used as self-corrections were disregarded. Incomplete or unintelligible words were excluded. PCC was calculated separately for the naming and imitation tasks. Subsequently, each child was classified according to the severity cutoffs proposed by the instrument: PCC above 85% = mild disorder; 65–85% = mild-to-moderate; 50–65% = moderate-to-severe; and below 50% = severe.

Parents of children diagnosed with phonological disorder (in both RG and CG) were counseled and referred for speech-language intervention.

Criteria for data analysis

Data from participants in the CG and RG were entered into an Excel spreadsheet and organized according to the following variables: school type (monolingual or bilingual), mothers whose native language was Brazilian Portuguese, sex, age, phonological processes in the imitation and naming tasks (ABFW/phonology), and Percentage of Consonants Correct (PCC) in imitation and naming.

Descriptive analyses were conducted using absolute and relative frequencies, measures of central tendency (mean and median), and dispersion (standard deviation, minimum, and maximum). For age, treated as a quantitative variable, normality

was tested; since the data did not meet normality assumptions, the nonparametric Mann–Whitney test was used to compare children from bilingual and monolingual schools.

To analyze the association between qualitative independent variables and the dichotomous outcome (children with and without phonological deviations), the chi-square test was applied. Univariate logistic regression was performed to estimate odds ratios (OR) and their 95% confidence intervals (95%CI). In the multiple model, independent variables with p-values < 0.20 in the univariate analysis were included.

When phonological disorder was stratified into three or four categories, univariate multinomial logistic regression was used to obtain OR estimates. A 5% significance level ($p \leq 0.05$) was adopted. Data were entered into an Excel spreadsheet and analyzed using SPSS version 17.0.

Results

The sample consisted of 171 children, most of whom were enrolled in bilingual schools (70.2%). The sex distribution was balanced, and all mothers were native speakers of Brazilian Portuguese.

The overall mean age of the children was 4.7 years (± 0.8), with a median of 4.8 years and a range from 3.3 to 6.2 years.

A significant difference in age was observed between school types:

- In bilingual schools, the mean age was 4.9 years (± 0.8), with a median of 5.1 years (range 3.3–6.2 years).
- In monolingual schools, the mean age was 4.2 years (± 0.7), with a median of 4.2 years (range 3.3–5.8 years).

The Mann–Whitney test indicated a statistically significant difference between age distributions ($p < 0.001$).

Table 1. Sample Characteristics

Characteristic	Total	Bilingual School	Escola Monolíngue
Sample size (N)	171	120	51
Mean age (years)	4,7 (±0,8)	4,9 (±0,8)	4,2 (±0,7)
Median age (years)	4,8	5,1	4,2
Age range (years)	3,3 – 6,2	3,3 – 6,2	3,3 – 5,8

Phonological deviations

Most children (83.6%) did not present phonological deviations. The most frequent processes were liquid simplification, with an occurrence of 17.0% in imitation and 15.2% in naming.

In the overall classification (absent, one process, and two or more), a higher incidence of errors was observed in the imitation context (32.8%), ranging from 0 to 4 altered processes in imitation and from 0 to 3 in naming. Considering both contexts together, up to 7 altered processes were identified.

Inferential statistical analysis (association between school type, age, and probability of phonological disorder)

A statistically significant association was found between school type, age, and the presence of phonological errors. Children from bilingual schools had a lower probability of phonological deviations than those from monolingual schools (7.5% vs. 31.5%; $p < 0.001$). With respect to age, children aged 4.8 years or older were less likely to present phonological deviations (6.2% vs. 25.7%; $p < 0.001$).

Table 2. Probability of Phonological Disorder by School Type and Age

Variable	Category	Probability (%)	p-value
School type	Bilingual	7,5	0,001
	Monolingual	31,5	
Age	≥ 4,8 years	6,2	0,001
	< 4,8 years	25,7	

Univariate analysis showed a protective association for bilingual children (OR = 0.18; 95% CI 0.07–0.77) and for those aged 4.8 years or older (OR = 0.19; 95% CI 0.07–0.51). Both factors remained independently associated with phonological disorder, with OR = 0.27 (p = 0.008) for school type and OR = 0.30 (p = 0.025) for age.

Table 3. Association Between Independent Variables and Phonological Deviations (Univariate Analysis)

Variable	Odds Ratio (OR)	95% CI	p-value
School type	0,18	0,07 – 0,77	
Age	0,19	0,07 – 0,51	
School type (adjusted)	0,27		0,008
Age (adjusted)	0,30		0,025

When both factors were included in the same model, their associations remained independent. In other words, being bilingual continued to reduce the likelihood of disorder (OR = 0.27, p = 0.008), as did being 4.8 years of age or older (OR = 0.30, p = 0.025). This indicates that each factor, on its own, contributes to lowering the probability of presenting the disorder, even in the absence of the other.

Inferential statistical analysis (association with alterations in phonological processes)

There was a statistically significant association between alterations in phonological processes and school type. Children from monolingual schools were more likely to show alterations in two or more processes in imitation (21.6% vs. 5.8%; p < 0.001) and in naming (13.7% vs. 4.2%; p = 0.004).

Table 4. Frequency of Multiple Phonological Deviations by School Type and Task Context (Imitation and Naming)

Task Context	Processes	Monolingual (%)	Bilingual (%)	p- value
Imitation	≥ 2	21,6	5,8	0,001
Naming	≥ 2	13,7	4,2	0,004

Logistic regression for imitation indicated that being bilingual was a protective factor against phonological alterations, with OR = 0.26 (p = 0.005) for one altered process and OR = 0.18 (p = 0.001) for two or more. The same pattern was observed in naming, with OR = 0.32 (p = 0.015) for one alteration and OR = 0.23 (p = 0.017) for two or more.

Table 5. Relative Risk (Odds Ratio) of Phonological Deviations by Number of Processes and Task Context

Cont Task Context exto	Processes	Odds Ratio (OR)	p-value
Imitation	1	0,26	0,005
Naming	1	0,32	0,015
Imitation	≥ 2	0,18	0,001
Naming	≥ 2	0,23	0,017

Combined context: imitation + naming

In the combined context of imitation and naming, children from monolingual schools were more likely to show deviations in 2 to 3 phonological processes (25.5% vs. 9.2%; p < 0.001) and in 4 or more processes (11.8% vs. 3.3%; p = 0.001).

Table 6. Frequency of Children With Multiple Phonological Deviations by School Type, Number of Processes, and Task Context

Task Context	Processes	Monolingual (%)	Bilingual (%)	p-value
Imitation + Naming	2–3	25,5	9,2	0,001
Imitation + Naming	≥ 4	11,8	3,3	0,001

Logistic regression indicated a protective effect of bilingualism, with OR = 0.27 (p = 0.049) for one alteration, OR = 0.23 (p = 0.001) for 2 to 3 alterations, and OR = 0.18 (p = 0.012) for 4 or more alterations.

Sex was not significantly associated with phonological alterations, indicating that school type and age were the main factors related to the presence of such alterations.

Table 7. Relative Risk (Odds Ratio) of Phonological Deviations by Number of Processes and Task Context

Task Context	Processes	Odds Ratio (OR)	p-value
Imitation + Naming	1	0,27	0,049
Imitation + Naming	2-3	0,23	0,001
Imitation + Naming	≥ 4	0,18	0,012

Discussion

This study aimed to comparatively analyze the phonological performance of Brazilian children attending bilingual and monolingual schools. The finding that most children in the sample did not present phonological deviations supports previous evidence that the simultaneous acquisition of two languages does not impair the phonological acquisition of the mother tongue[4,5,7].

Regarding sex, although no significant differences were found between boys and girls in this study, other investigations[12,16] have indicated that boys may show a higher frequency of phonological alterations. For example, a study on phonological awareness in children exposed to Portuguese and German reported a higher prevalence of phonological alterations among boys[12].

Evidence indicates that bilingual children perform similarly to monolinguals in phonemic fluency tasks, which are related to executive functions, but tend to show lower semantic fluency, possibly due to a smaller vocabulary size. This deficit is offset by greater use of switching between categories, which reflects cognitive adaptations that help sustain verbal performance. Such findings are relevant for interventions focused on lexical and functional development[19].

This adaptive mechanism is consistent with the hypothesis that bilingual children may develop executive skills that help maintain verbal performance even in the face of vocabulary-related challenges. This interpretation is consistent with the present findings, which indicate a lower probability of phonological alterations among bilingual children, as corroborated by the statistical analyses.

Age also emerged as a relevant factor in phonological acquisition. It is known that the number of accurate phonological productions increases proportionally with age, while omissions and substitutions decrease. This pattern suggests that the likelihood of phonological disorders diminishes as children grow older[14,17]. Such evidence reinforces the protective association observed for bilingualism and age, in line with studies indicating that maturation of phonological structures and increased linguistic practice are key elements for reducing disorders at later ages.

The number of phonological processes observed in children from monolingual schools was higher than in those from bilingual schools. There was also a greater number of monolingual children who exhibited phonological processes not typically expected during oral language development, namely: voicing of plosives, voicing of fricatives, devoicing of plosives, and devoicing of fricatives.

The results are in line with recent literature showing no substantial differences in phonological performance between bilingual and monolingual groups, although there may be a slight advantage for monolinguals in specific aspects of phonological awareness. This underscores the need for tailored educational and speech-language strategies that take into account the particularities of phonological acquisition in bilingual children, thereby fostering balanced and appropriate development of these abilities[20,7]. Moreover, the protective effect of bilingualism may be related to exposure to multiple phonetic systems, which promotes greater cognitive flexibility and enhanced metalinguistic skills[18,19].

With respect to phonological processes, in both naming and imitation, children from monolingual schools were more likely to present alterations in 2 to 3 processes compared with children from bilingual schools, reinforcing the pattern observed in the inferential analyses.

Studies involving bilingual populations in continuous language contact have described the development of hybrid phonological systems, including intermediate allophonic variants shaped by environmental influence and the language of origin. This complexity highlights the importance of integrative approaches to assessment and intervention in multilingual contexts[21].

Thus, bilingualism may foster diversified and flexible phonological repertoires, as well as enhanced cognitive abilities related to executive control and language switching[21, 19, 22].

Finally, the results point to the need for differentiated clinical assessments and integrated pedagogical programs that promote phonological development, particularly among younger children and those in monolingual contexts, who showed greater susceptibility to phonological alterations.

Conclusion

In the studied population, children attending bilingual schools showed a lower probability of phonological deviations than their monolingual peers. This applied to both phonetic inventory and

to the presence of phonological processes deviations. These findings suggest that early exposure to bilingual schooling, when supported by consistent native-language input, may occur without adverse effects on the phonological acquisition of Portuguese.

References

1. Ferjan Ramírez N, Ramírez RR, Clarke M, Taulu S, Kuhl PK. Speech discrimination in 11-month-old bilingual and monolingual infants: a magnetoencephalography study. Dev Sci. 2017 Jan;20(1): e12427. doi: 10.1111/desc.12427. PMID: 27041494.

2. Goksan S, Argyri F, Clayden JD, Liegeois F, Wei L. Early childhood bilingualism: effects on brain structure and function. F1000Research. 2020; 9: 277. doi: 10.12688/f1000research.23216.2.

3. Byers-Heinlein K, Fennell CT. Using speech sounds to guide word learning: The case of bilingual infants. Child Development. 2007; 78(5): 1510-25.

4. Meisel JM. Early child second language acquisition: French gender in German children. Bilingualism: Language and Cognition. 2018; 21(4): 656-73. doi:10.1017/S1366728916000237.

5. Brancalioni AR, Bogoni AP, Silva DP, Giacchini V. A comparative study on phonological acquisition and performance in phonological awareness by children exposed to a bilingual or monolingual family environment. Rev CEFAC. 2018; 20(6): 724-33. doi:10.1590/1982-021620182061018.

6. Goriot C, Unsworth S, van Hout R, Broersma M, McQueen JM. Differences in phonological awareness performance: Are there positive or negative effects of bilingual experience? Linguist Approaches Biling. 2021 Jun;11(3): 418-51. doi: 10.1075/lab.18082.gor.

7. Gabriotti RB, Zomignan R. O cérebro bilíngue: processos cerebrais durante a aquisição de linguagem. Rev Cient Multidisc Núcleo Conh. 2020; 5(8): 68-96. Disponível em: https://www.nucleodoconhecimento.com.br/educacao/cerebro-bilingue.

8. Medeiros ACD, Santos MFP, Varela FVC, Rocha TAL, Messias BLC, Azoni CAS. O bilinguismo no desenvolvimento das habilidades de consciência fonológica: revisão integrativa da literatura. Rev CEFAC. 2020; 22(4): e0320. Disponível em: https://www.scielo.br/j/rcefac/a/tThWmSSJCqfPvjGfYGM8WPw/?lang=pt

9. Souza LBR, Leite AGC. Perfil das habilidades de consciência fonológica em crianças bilíngues e monolíngues. CoDAS. 2014; 26(1): 61-7. doi:10.1590/S2317-17822014000100009.

10. Oppenheimer F, Ávila CRB. Influence of bilingualism in usual word designation in naming tasks: a study with Brazilian preschoolers. Pró-Fono. 2004;16(2):169-78.

11. Brancalioni AR, Bogoni AP, Silva DP, Giacchini V. Estudo comparativo sobre a aquisição fonológica e o desempenho em consciência fonológica entre crianças expostas a ambiente familiar bilíngue e crianças expostas a ambiente familiar monolíngue. Rev CEFAC. 2018; 20(6): 818-28. doi:10.1590/1982-021620182061018.

12. Araújo FP, Lindenbaun J, Figueiredo FV, Chiappetta ALML. A consciência fonológica do português na aquisição simultânea de duas línguas. Rev CEFAC. 2006; 8(1):15-9.

13. Fleury FO, Avila CRB. Nomeação rápida, memória fonológica e fluência leitora em escolares brasileiros bilíngues. CoDAS. 2015; 27(1): 37-43. doi:10.1590/2317-1782/20152014091.

14. Wertzner HF. Fonologia: desenvolvimento e alterações. In: Andrade CRF, Befi-Lopes DM, Fernandes FDM, Wertzner HF, organizadores. ABFW – Teste de Linguagem Infantil nas Áreas de Fonologia, Vocabulário, Fluência e Pragmática. Carapicuíba: Pró-Fono; 2000. p. 5-32.

15. Shriberg LD, Kwiatkowski J. Phonological disorders I: a diagnostic classification system. J Speech Hear Disord. 1982;47(3):226-41.

16. Lasch SS, Mota HB, Cielo CA. Consciência fonológica: o desempenho de meninos e meninas bilíngues e monolíngues. Rev. CEFAC [Internet]. 2010 [cited 2017 Jul 14]; 12(2): 202-9. Available from: http://www.scielo.br/pdf/rcefac/v12n2/116-08.pdf

17. Rosal AGC, Cordeiro AAA, Queiroga BAM. Consciência fonológica e o desenvolvimento do sistema fonológico em crianças de escolas públicas e particulares. Rev CEFAC. 2013; 15(4): 837-46. doi:10.1590/S1516-18462013000400012.

18. Alves UK, Finger I. Alfabetização em contextos bilíngues: revisão recente. Delta. 2023; 39: e202339012. Disponível em: https://www.scielo.br/j/delta/a/JJ4Sgpfs9zymh59LnLvqhRs/?lang=pt.

19. Brandeker M, Thordardottir E. Verbal fluency in bilingual school-age children: looking at switching, clustering, and the effect of language experience. Int J Biling. 2022;27(3):374-93. doi: 10.1177/13670069221092897

20. Ghorbani A, Saneii SH, Yari P. Phonological Knowledge in 5-year-old Bilingual Turkish Qashqai-Persian Children and Fars Monolingual Children. Function Disabil J. 2020; 3: 377-82.

21. Kirkham S, McCarthy K. Acquiring allophonic structure and phonetic detail in a bilingual community: the production of laterals by Sylheti-English bilingual children. Int J Biling. 2021; 25(3): 531-47. doi: 10.1177/1367006920914718

22. Patel P, Chatterjee Singh N, Torppa M. Understanding the role of cross-language transfer of phonological awareness in emergent Hindi-English biliteracy acquisition. Read Writ. 2022; 35(7): 1633-61. doi: 10.1007/s11145-022-10253-x

23. Molina C, Engelbert APF, Silva SM. Reflexões sobre consciência fonológica no biletramento português/inglês na infância. Odisseia. 2023;12(28). doi:10.21680/1983-2435.2023v8n2ID32498.

24. Alves UK. Uma abordagem contextualizada da consciência fonológica na educação infantil bilíngue. Cad Estud Ling. 2024; 66: e024010. doi:10.20396/cel.v66i00.8676721. Disponível em: https://periodicos.sbu.unicamp.br/ojs/index.php/cel/article/view/8676721