Article

Effectiveness of an Intervention Program for Linguistics Skill Development[1]

Acácia Aparecida
Angeli dos Santos[2]
Universidade São Francisco,
Campinas-SP, Brazil

Neide de Brito Cunha
Universidade do Vale do Sapucaí,
Pouso Alegre-MG, Brazil

Katya Luciane de Oliveira
Universidade Estadual de Londrina,
Londrina-PR, Brazil

Paula Cristina
Camargo Osés
Universidade São Francisco,
Campinas-SP, Brazil

Abstract: The importance of language and its formal instruction during the initial school phase has stimulated studies that seek options to implement them successfully. From this perspective, this study aimed to verify the effects of an intervention program on the language skills assessed. The participants were sixth-grade elementary school students evaluated in reading comprehension, spelling, word recognition and metatextual awareness. The intervention program was performed with 103 students, divided into experimental (EG) and control groups (CG). The experimental group attended 10 sessions, which included the use of gradual Cloze technique in texts of various textual genres, which were intended to develop the reading comprehension and the development of metatextual awareness. Analyses indicated the superiority of EG over the CG in the post-test. New studies are needed to permit the generalization of the results.

Keywords: Cloze test, reading comprehension, word recognition, metalanguage

Eficácia de um Programa de Intervenção para o Desenvolvimento de Habilidades Linguísticas

Resumo: A importância da linguagem e de seu ensino formal durante a fase escolar inicial tem motivado estudos que procuram alternativas para implementá-las com sucesso. Sob essa perspectiva, o presente estudo objetivou verificar os efeitos de um programa de intervenção sobre as habilidades linguísticas avaliadas. Os participantes foram alunos do 6º ano do ensino fundamental, avaliados quanto à compreensão de leitura, à grafia, ao reconhecimento de palavras e à consciência metatextual. Foi realizado um programa de intervenção com 103 deles, separados em grupo experimental (GE) e de controle (GC). O grupo experimental participou de 10 sessões, usando a técnica de Cloze gradual em textos de gêneros textuais diversos, por meio dos quais pretendeu-se, além do desenvolvimento da compreensão de leitura, também o desenvolvimento da consciência metatextual. As análises indicaram superioridade do GE sobre o GC no pós-teste. Sugere-se a realização de novos estudos para permitir a generalização dos resultados.

Palavras-chave: teste de Cloze, compreensão da leitura, reconhecimento de palavras, metalinguagem

Eficacia de un Programa de Intervención para el Desarrollo de Habilidades Lingüísticas

Resumen: La importancia del lenguaje y de su enseñanza formal durante la fase escolar inicial ha motivado estudios que buscan alternativas para implementarlas con éxito. Bajo esa perspectiva, este estudio tuvo como objetivo verificar los efectos de un programa de intervención en las habilidades lingüísticas evaluadas. Participaron estudiantes del sexto grado de la escuela primaria, evaluados respecto a la comprensión de lectura, la grafía, el reconocimiento de palabras y la consciencia metatextual. Se llevó a cabo un programa de intervención con 103 de ellos, divididos en grupos experimentales y de control. Los grupos experimentales participaron de 10 sesiones, que incluyeron el uso de la técnica de Cloze gradual en textos de géneros textuales diversos, con los que se pretendió, además del desarrollo de la comprensión lectora, también el desarrollo de la consciencia metatextual. Los análisis indicaron la superioridad del GE en comparación con el GC en el post-test. Se sugiere llevar a cabo nuevos estudios para permitir la generalización de los resultados.

Palabras clave: test de Cloze, comprensión de lectura, reconocimiento de palabras, metalenguaje

The study of the relation between written language and linguistic awareness or metalanguage, that is, thinking about language, is linked to metacognition, frequently discussed by authors in Cognitive Psychology, such as Flavell, P.H. Miller and S.A. Miller (1999) and Sternberg (2008), among others. Metalinguistic activities are conscious skills of the subject to deliberately maintain the monitoring and reflection about language (Maluf, Zanella, & Pagnez, 2006; Salles & Correa, 2014). Metalanguage is subdivided into subtypes, classified by Gombert (2003) according to the different aspects of the language the individual focuses on: the phoneme in phono-

[2] Correspondence address: Acácia Aparecida Angeli Santos. Universidade São Francisco, Campus Swift. Rua Waldemar César da Silveira, 105. Jardim Cura D'Ars. CEP: 13045-510. Campinas-SP, Brazil.

logical awareness, the word in morphological awareness, the syntax in syntactical awareness, the text in metatextual awareness, and the context in pragmatic awareness.

In this study, the development of metatextual awareness will be focused on, considered as the capacity to analyze a text while maintaining intentional monitoring. When analyzing the text, if individuals are able to distinguish among different parts, assessing their degree of relevance and thematic coherence, they will be able to better understand the information the text contains (Spinillo & Simões, 2003). In comparison with other meta-linguistic skills, such as phonological and morphosyntactic awareness, the relation between metatextual awareness and reading has been hardly explored, strengthening the importance of its discussion in this study.

Pedraza (2014) observes that the studies on the assessment of reading and other related skills are intended to understand how they function and how to diagnose possible difficulties, in the acquisition as well as in the development process. That explains the experts' interest in assessing these skills at all education levels, including not only the two phases of Basic Education, but also Higher Education (Alcará & Santos, 2015; V.L.O. Cunha, Silva, & Capellini, 2012; Gomes & Boruchovitch, 2009; Spinillo, Mota, & Correa, 2010). This is one of these studies, aiming not only to assess relevant skills for reading comprehension and for the development of word writing at the start of the 2nd cycle of elementary education, but also to verify the possibility the improve them through a program developed in a natural situation, in the classroom. It should be clarified that the choice of this cycle is justified, because it is when the student substantially increases the contact with new contents, expanding the knowledge to support the subsequent cycle, that is, secondary education (Sousa, 2007).

For authors like Suehiro and Santos (2012), research on the constructs focused on has appointed the existence of a relation between the understanding of reading and writing. They have also shown the relation between the understanding of reading and school performance, which highlights the importance of investing in intervention programs (Joly & Piovezan, 2012; Oliveira, Boruchovitch, & Santos, 2008; Piovezan & Castro, 2008). Despite the lack of a consensus, some Brazilian studies on the theme (Joly, Bonassi, Dias, Piovezan, & Silva, 2014; Oliveira et al., 2008) confirm the findings of foreign studies (Chiu & McBride-Chang, 2006) and detect the superiority of girls. The existence of diverging results appoints the need to continue exploring this aspect in further research, which is another objective of this study.

The retrieval of literature from the Scientific Electronic Library Online - SciELO Brazil in the last five years (2010-2015), using the terms "reading" and "intervention", permitted the identification of different Brazilian articles, in view of the specificity of the focus on aspects of the Portuguese language. A brief description of each of them follows, respecting the chronological order of the publications.

With a view to improving the readers' understanding through the monitoring skill, Coelho and Correa (2010) employed the error detection paradigm. The participants were 62 students from the first year of secondary education, distributed between the experimental and control groups. In the pre and post-test, monitoring and reading tasks were used (Cloze test). No initial difference was found between the groups and, after the intervention, the experimental group performed significantly better than the control group on the reading and monitoring tasks, permitting the conclusion that the progress in the development of the textual understanding is related to how efficiently the adolescents monitor their reading.

The results of the application of two intervention programs are reported in Santos and Oliveira (2010). In the first, with 85 fourth-year students, as well as in the second, with 73 fourth and fifth-year (former 3rd and 4th-grade), the authors aimed to investigate the adequacy of the Cloze test to assess and develop the reading comprehension. In both, the participants were distributed in experimental and control groups and, as an intervention, the gradual Cloze technique was applied, with a gradually increasing level of difficulty. The analyses indicated the superiority of the EG over the CG in the post-test situation of the intervention only in the second program, which was expanded in terms of number of sessions. The results indicated the efficacy of the technique as an intervention instrument.

To analyze the therapeutic results based on the introduction of textual genres, Schneider, Souza and Deuschle (2010) developed a research with five subjects between 10 and 13 years of age and a history of school failure and repetition, enrolled in the 6th or 7th year of primary education. The study facilitated the motivation to read and write and led not only to textual progression and cohesion, but also to the adequacy of the formal aspects of writing, such as orthography and punctuation. The program favored other reading and writing practices in the group, revealing that the students did not have any disorder, but that they were victims of inappropriate literacy practices.

The effects of a psychopedagogical intervention on the reading understanding of 5th year students from a public elementary school were assessed by Gomes and Boruchovitch (2011), randomly drawn to the experimental and control groups. The participants answered the Scale of Learning Strategies and also used Cloze tests at three moments. During seven sessions, the Experimental Group received instructions on general and specific learning strategies for reading, stimulating metacognition, motivational support and orientations to study. The authors identified progresses in reading understanding in both groups, which were more expressive in the Experimental Group.

Capellini, Oliveira and Pinheiro (2011), in turn, intended to verify the efficacy of a computer program for metaphonological remediation and reading for students with learning difficulties. The participants were 600 students from the 3rd to 5th year of elementary school, distributed in two groups of 300 students each, one with good school performance and the other with students who presented learning difficulties. The results showed a difference between the pre and post-assessment situation for the students from the group that performed well on all tests. The experimental group with difficulties performed better on the sound recognition, segmentation and phonemic manipulation tests. Through the findings, the authors highlight the gains of the students with learning difficulties submitted to the program, who developed the metaphonological skills needed to develop reading.

Also using technological resources, Joly and Piovezan (2012) assessed the Computerized Strategic Reading Program (PILE) to improve elementary students' reading comprehension. The participants were 58 sixth to ninth-year students, 29 of whom were part of the control group (CG) and 29 of the intervention group (IG). Once again, the Cloze test was used as the pre and post-test. The program was developed during six weeks, during which 19 meetings were held. The authors detected significant improvements in the reading comprehension levels for both groups and considered that the PILE contributed to this increase.

Machado and Capellini (2014) developed another intervention study to compare the reading and writing performance of 15 children from the second to sixth year of elementary school who had been diagnosed with developmental dyslexia, being 75% male. They were divided in an experimental group and a control group, being paired according to gender and age range. The children were submitted to a diagnostic survey of reading and writing and to the tutorial intervention program based on the Intervention Response Model. The results revealed statistically significant differences between the groups. The experimental group performed better on the word reading and reading tasks when compared to the control group. The authors concluded that the intervention model used was effective for used with dyslexic children.

In view of the expectation that, at the end of formal secondary education, the students would present a satisfactory reading level, but aware that that is not exactly what happens, Macedo, Santos, Oliveira and Martins-Reis (2015) developed an intervention research to investigate the efficacy of a Speech Therapy Program for the Promotion of Literacy (PFPL) to improve the reading comprehension. Therefore, they selected two fourth-year class groups from the first cycle of Elementary Education at a municipal public school in Belo Horizonte. The program included different types of reading activities and phonological and orthographic processing tasks. As a result, the authors identified that the groups performed similarly on the initial assessment, with a high prevalence of children with reading comprehension difficulties. After participating in the PFPL, the reading comprehension performance of the children in the experimental group significantly improved in relation to the control group, showing that the program was effective for the reading comprehension.

The different programs retried here share the use of diversified strategies, several of which used the Cloze technique and other resources to improve the reading. In many of them, particularly the studies developed with larger groups of students, the results reached were not as expressive in quantitative terms, but all of them appointed the existence of qualitative improvements and particularly of a motivational attitude that is more favorable to the reading activities. The described studies evidence that different linguistic skills are related to the improvement of reading and writing, but that none was focused on the metatextual awareness, an important skill in this educational phase and on which disagreements exist in terms of the potential contribution to the reading comprehension, in line with Spinillo et al. (2010).

As both the programs that employed the Cloze and those that used other intervention approaches promoted reading performance improvements, this study departs from the premise that formal activity experiences to improve the metatextual awareness can maximize the development of reading and word writing in sixth-year elementary students, when they are already expected to possess the basic knowledge. Thus, we intended to assess the efficacy of an intervention program in a classroom situation, using the Cloze technique in combination with the recognition of text genres. In addition, the students' performance will be compared, considering the gender variable.

Method

Participants

The research started with 162 children from five different sixth-year classes, being 36 students from class A, 33 from class B, 31 from class C, 31 from class D and 31 from class E. Nevertheless, considering the students who participated in the pre and post-test and in at least seven intervention sessions, only 96 students remained. Classes A and E composed the experimental group (EG) with 47 students (minimum age = 10; maximum = 12; M = 11.04; SD = .735), being 70.8% male (n = 32) and 29.2% female (n = 15). Classes B and C constituted the control group (CG) with 49 students (minimum age = 10; maximum = 12; M = 10.94; SD = .604), being 46.9% male (n = 23) and 53.1% female (n = 26). It should be highlighted that both groups come from a single public school in the interior of the State of São Paulo, without any preliminary reason for distinction in terms of the skills focused on.

Instruments

Cloze texts 'The princess and the ghost' and 'A happy vengeance'. The stories were structured according to the Cloze technique, which consists in the suppression of some words from the text, replaced by a dotted line proportional to the size of the word omitted (Taylor, 1953). After the initial reading, the respondents are asked to complete the blanks with the words that best complete the meaning of the text. These texts were especially elaborated for use with elementary-school children. In the correction, one point is attributed to every correct answer, adopting the verbatim correction, according to which only the words equal to those taken from the original text and correctly written (spelling and accentuation) are scored. Studies have demonstrated evidence of validity and precision estimates in both stories (N.B. Cunha & Santos, 2009; Santos & Oliveira, 2010).

Writing Assessment Scale – EAVE (Sisto, 2005). The scale consists of a list of 55 words to be dictated to the children without repetition. The students should write the words on a blank sheet of paper. In the correction, one point is attributed to every word the child writes correctly, while absent words or with spelling and accentuation errors are considered as wrong. Each student's score corresponds to the sum of the errors, with a maximum score of 55 points. Studies have appointed the existence of validity evidence (N.B. Cunha & Santos, 2010) and good estimated precision concerning the

reproduction of written words.

Word Recognition Scale – EREP (Sisto, 2006). This is a multiple-choice scale with 55 words, organized in alphabetical order. For each of them, two other words with grammatical errors were created. Only one of the three alternatives is correct. The list contains monosyllabic, two-syllabic and polysyllabic words, with and without writing difficulties, as explained by Kingeski and Sisto (2004). Each student's score corresponds to the sum of the correct answers, with a maximum score of 55 points.

In studies developed with the instrument, validity evidence was identified, the most relevant being the criterion validity (N.B. Cunha & Santos, 2010), considering that it is sensitive to the distinction of statistically significant differences concerning the recognition of words among the school years. In addition, appropriate precision patterns have been identified.

Metatextual Awareness Assessments Questionnaire – QACM (Santos & Cunha, 2012). This instrument presents different texts in different genres, from which the student should select, among the options, the genre he considers correct, recognizing it without presenting any support. One point is attributed to each item that is marked correctly. In the version applied, the QACM consisted of 20 texts, being scored from 0 to 20 points. The authors' study involving elementary-school students produced evidences of validity through the relation with a reading comprehension measure with which it converged. In addition, using the school years as a criterion, the instrument was sufficiently sensitive to distinguish the school level.

Procedure

Data collection. The procedure started with the students whose parents signed the Informed Consent Form. The research was developed in two phases. The instruments were applied in group in the classroom. The duration was 40 minutes, in the pretest as well as the post-test and in the intervention sessions with the experimental group.

The students in the experimental group (one took classes in the morning and the other in the afternoon) answered 19 Cloze texts in different text genres, applied two by two, with three in the third session only. The texts were taken from governmental programs (Reading and Writing and Educational Programs for Literacy Teachers - PROFA) or created or especially adapted for the research. The tests were applied twice per week and, after the application, the text genres applied that day were explained, as shown in Table 1. For the correction, the students were asked about their knowledge on the text genres, orally answering the applier's questions. Thus, they gradually defined the particularities of each.

Table 1

Scheme of the Intervention Program Involving Metatextual Awareness and the Gradual Cloze

Sessions	Textual Gender	Gradual Cloze
1st session	Riddle + Joke	Three alternatives
2nd session sessão	Poetry + Nursery rhyme	Limited Cloze
3rd session sessão	Recipe+Instructions+Game rules	Dotted with 1st letter
4th session sessão	History + Comic	Dotted with 1st letter
5th session sessão	Diary + Interview	Dotted without 1st letter
6th session sessão	Letter + E-mail	Dotted without 1st letter
7th session sessão	Advertisement + News	Continuous line with 1st letter
8th session sessão	Dictionary + Invitation	Continuous line with 1st letter
9th session sessão	Review + Chronicle	Continuous line with 5th word

According to the sequence of Table 1, the Cloze texts differed in terms of gradually inserted differences. For the first session of the intervention program, the two texts were organized with three alternative answers, presented under each blank space. In the second session, the limited Cloze technique was used, in which all words taken from the text were regrouped in random order in the part above the text. In the third and fourth sessions, the texts were arranged with a dotted line, showing the exact number of letters each of the omitted words contained, the first letter being inserted in advance. In the fifth and sixth sessions, the dotted line was maintained without inserting the first letter. In the seventh and eighth sessions, the text was structured with a continuous line proportional to that of the omitted word, displaying the first letter of the word. In the final session, the fifth word was omitted in the structure of the texts, without additional clues to complete the gaps. Af-

ter closing off the intervention, the post-test was immediately applied, which involved the application of two Cloze tests, the QACM, the EAVE and the EREP. Both groups participated in the post-test, the experimental and the control group.

Data analysis. Parametric statistical tests were used, considering the normal distribution of the data with $p > .005$, obtained based on the Shapiro-Wilk test. Besides descriptive statistics, the t-test for related samples was used to compare the same participants' results before and after the application of the intervention program. The t-test for independent samples was also used to compare the participants separated per gender, adding the analysis of Cohen's d to verify the effect size.

Ethical Considerations

All ethical requirements were complied with, according to National Health Council Resolution 466/2012. Approval for this research was obtained from the Research Ethics Committee at Universidade São Francisco under protocol number 126.336 and CAAE 07822512.4.0000.5514.

Results

Before the start of the intervention, the students were characterized in terms of the linguistic skills focused on, that is: reading comprehension, writing, word recognition and metatextual awareness. On that occasion, all sixth-year students were involved, that is, 162 students. The data are displayed in Table 2.

The data revealed the participants' heterogeneity, con-

Table 2

Descriptive Statistics of Pre-Test Obtained With Total Students (N = 162)

Measures	Minimum	Maximum	M	SD
Cloze 1 pre-test	1	13	8.00	2.84
Cloze 2 pre-test	0	12	5.09	2.84
Cloze Total pre-test	1	24	13.09	5.14
EREP pre-test	0	52	37.90	12.31
EAVE pre-test	1	55	20.66	12.11
QACM pre-test	0	20	12.54	3.60

sidering that, in various tests, there were students who did not give any correct answer. It is important to recall that, on the EAVE, the 55 points correspond to the absence of correct answers, as the instrument scores errors. The comparison between the groups before the intervention showed that there were no significant differences between the classes that parti-

cipated in the EG when compared to the CG.

Considering the objective of assessing the efficacy of the proposed intervention program, the t-test for dependent samples of the groups was used, comparing the results of the pre and post-tests. The obtained scores are displayed in Table 3.

As can be observed in Table 3, the comparison between

Table 3

Comparison With t-Test for Dependent Samples Between Performances of Each Test on the Pre and Post-Test for the EG (n = 47) and CG (n = 49)

Groups	Comparisons	M	SD	t	p
	Cloze pre X Cloze post	-2.98	4.89	-4.43	<.001
	EAVE pre X EAVE post	2.96	14.46	1.49	.142
GE	QACM pre X QACM post	0.45	4.53	0.72	.470
	EREP pre – EREP post	-8.15	15.20	-3.90	<.001
	Cloze pre X Cloze post	-1.18	4.87	-1.68	.098
	EAVE pre X EAVE post	4.08	14.55	1.94	.058
GC	QACM pre X QACM post	0.95	5.76	1.15	.256
	EREP pre – EREP post	-2.12	16.00	-0.92	.362

the mean scores on the pre and post-tests in relation to the Total Cloze score showed a significant increase. The same occurred for the word recognition performance (EREP). As regards the comparison between the mean pre and post-test scores, when the writing and metatextual awareness were assessed, there was no significant difference between the pre and post-tests.

What the objective of checking for differences in relation to the gender variable is concerned, the t-test for independent samples was applied. The obtained results can be observed in Table 4.

We can observe in Table 4 that the difference between

Table 4

Comparison With the t-Test for Independent Samples Between the Performances of Each Test on the Pre and Post-Test for Girls (n = 41) and Boys (n = 55)

Instruments	Gender	*M*	*SD*	*t*	*P*	*d*
Cloze Pre	Male	12.73	5.349	-2.470	.015	.66
	Female	15.27	4.450			
Cloze Post	Male	15.16	5.308	-2.185	.031	.44
	Female	17.34	4.096			
EREP Pre	Male	36.84	12.412	-1.998	.049	.47
	Female	41.37	9.792			
EREP Post	Male	42.65	9.926	-1.327	.188	.35
	Female	45.22	8.554			
EAVE Pre	Male	21.39	11.871	1.428	.157	.28
	Female	18.00	10.881			
EAVE Post	Male	18.80	9.801	1.284	.202	.22
	Female	16.24	9.444			
QACM Pre	Male	12.51	3.558	-2.448	.016	.78
	Female	14.12	2.619			
QACM Post	Male	13.13	4.538	-0.743	.459	.00
	Female	13.76	3.419			

the genders showed the superiority of girls on several measures, the most expressive differences being related to the pre-test situations for the Cloze (*p* < .015) and the QACM (*p* = .016). In the post-test situation, the difference between both genders only remained significant on the Cloze test (*p* = .031). It should be highlighted that, in all measures, the girls presented a superior performance, although not statistically significant. Once again, it should be reminded that, on the EAVE, the highest score represents a worse performance, as the errors are scored.

Discussion

Initially, when reflecting on the studies found in the scientific literature, it can be observed that various obtained favorable results through interventions intended to improve

or remedy the reading difficulties, especially in elementary-school students. In that perspective, a general analysis on the results obtained in this research suggests a positive impact of the intervention model proposed in the sample of students who participated in the experimental group.

The data revealed a significant difference between the mean scores on the pre and post-tests in terms of the Cloze results and also in the word recognition. At the end of the intervention, the experimental group performed qualitatively better than the experimental group in relation to the control group. It seems that, as the reading comprehension of the students in the experimental group improved, word recognition skills also improved. These data seem to support the idea that intervention actions focused on reading are valid and seem to have positive effects in the education process (Joly & Piovezan, 2012; Macedo et al., 2015; Machado & Ca-

pellini, 2014), among others.

The same did not happen for the writing variable, measured by the correct spelling of words, considering a study in which, using the same instruments, a correlation was identified between the reading comprehension and the writing skill (Suehiro & Santos, 2012). Another finding that caused estrangement was the fact that, when comparing the pre and post-test measures of the metatextual awareness variable, measured by the recognition of the text genre, no statistically significant difference could be identified between the two assessment times. Considering the concept by Spinillo and Simões (2003) that metatextual awareness represents the capacity to analyze the text, maintaining intentional monitoring to better understand the theme, perhaps the activities developed here have not been sufficient to achieve the development necessary for that purpose.

As the participating students demonstrated improvement in reading comprehension, a-questions are raised on their skills deficit before the intervention procedure. Thus, the results do not support the findings by Coelho and Correa (2010), which could evidence that the progress in reading comprehension is associated with the students' capacity to monitor their reading.

Concerning the differences in the scores of the instruments used in the pre and post-test situations, the girls demonstrated a better performance than the boys. That was the case on the Cloze pretests and the QACM and also on the Cloze post-test. These data converge to previous research findings (Chiu & McBride-Chang, 2006; Joly et al., 2014) that also indicated that the girls demonstrated a better performance than boys. This result appoints that further studies are needed with the instruments employed here to investigate if the way they are structured could somehow privilege boys or girls (Item-Response Theory – Rasch Model). In this respect, Santos and Cunha (2012) suggest that studies that consider the gender variable in elementary education remain scare, making discussions on the theme more difficult. This would promote respect for the particularities of each genre. Therefore, future research seems fundamental.

Finally, it is highlighted that the efficacy of the Cloze tests employed in the intervention proposal could be observed. Once again, as Santos and Oliveira (2010) observed in their study of elementary-school students, the Cloze is not only a diagnostic, but also an intervention resource.

It seems healthy to affirm that, when the reading comprehension difficulty is identified early, intervention actions can be devised to remedy and overcome the situation. This study demonstrates, on the one hand, how interventions using the gradual close can help to improve the children's reading comprehension in the classroom and how easy it can be used as an educational practice resource. On the other hand, it illustrates that text genres can be recognized in a playful manner, although it is clear that more sessions are needed to repeat each of them, as they were presented only once during the entire program.

As a limitation, the fact can be mentioned that the intervention program involved students from a single school and only sixth-year students, which the school dean made available for research because of their difficulties. In addition, the simultaneous introduction of two independent variables (gradual Cloze and metatextual awareness) impeded the verification of the effect of each independently. Another limitation was the fact that the maintenance of the classes in their natural form made gender-balanced samples impossible, in view of the large number of boys in the EG when compared to the CG. New studies are needed, including the efficacy assessment of interventions to improve linguistic skills, aiming to overcome the limitations appointed here.

Despite the awareness that interventions like this cannot solve the fundamental problems in Brazilian education, it is important to show that they are low cost and easily applicable alternatives, being accessible to elementary-school teachers. Therefore, they can be of interest to the professionals working in the school context and beyond.

References

Alcará, A. R., & Santos, A. A. A. (2015). Avaliação e desenvolvimento da compreensão de leitura em universitários [Evaluation and development of college students' comprehension]. *Estudos de Psicologia (Campinas), 32*(1), 63-73. doi:10.1590/0103-166X2015000100006

Capellini, S. A., Oliveira, A. M., & Pinheiro, F. H. (2011). Effectiveness of a metaphonological and reading remediation program for students with learning difficulties. *Revista da Sociedade Brasileira de Fonoaudiologia, 16*(2), 189-197. doi:10.1590/S1516-80342011000200013

Chiu, M. M., & McBride-Chang, C. (2006). Gender, context, and reading: A comparison of students in 43 countries. *Scientific Studies of Reading, 10*(4), 331-362. doi:10.1207/s1532799xssr1004_1

Coelho, C. L. G., & Correa, J. (2010). Desenvolvimento da compreensão leitora através do monitoramento da leitura [Improving reading comprehension by developing monitoring strategies]. *Psicologia: Reflexão e Crítica, 23*(3), 575-581. doi:10.1590/S0102-79722010000300018

Cunha, N. B., & Santos, A. A. A. (2009). Validade por processo de resposta no teste de Cloze [Response process validity in the Cloze test]. *Fractal: Revista de Psicologia, 21*(3), 549-562. doi:10.1590/S1984-02922009000300010

Cunha, N. B., & Santos, A. A. A. (2010). Estudos de validade entre instrumentos que avaliam habilidades linguísticas [Studies of validity between instruments to evaluate reading and writing abilities]. *Estudos de Psicologia (Campinas), 27*(3), 305-314. doi:10.1590/S0103-166X2010000300003

Cunha, V. L. O., Silva, C., & Capellini, S. A. (2012). Correlação entre habilidades básicas de leitura e compreensão de leitura [Correlation between basic reading skills and reading comprehension]. *Estudos de Psicologia (Campinas), 29*(Supl. 1), 799-807. doi:10.1590/S0103-166X2012000500016

Flavell, J. H., Miller, P. H., & Miller, S. A. (1999). *Desenvolvimento cognitivo [Cognitive development]* (C. Dornelles, Trad., 3a ed.). Porto Alegre, RS: Artes Médicas Sul.

Gombert, J. E. (2003). Atividades metalinguísticas e aprendizagem da leitura [Metalinguistic activities and reading learning]. In M. R. Maluf (Org.), *Metalinguagem e aquisição da escrita: Contribuições da pesquisa para a prática da alfabetização* [*Metalanguage and writing acquisition: Research contributions to the lieracy practice*] (pp. 19-64). São Paulo, SP: Casa do Psicólogo.

Gomes, M. A. M., & Boruchovitch, E. (2009). Proficiência em leitura: Um panorama da situação [Proficiency in reading: An overview]. In A. A. A. Santos, E. Boruchovitch, & K. L. Oliveira (Orgs.), *Cloze: Um instrumento de diagnóstico e intervenção [Cloze: A diagnostic and intervention tool]* (pp. 23-46). São Paulo, SP: Casa do Psicólogo.

Gomes, M. A. M., & Boruchovitch, E. (2011). Aprendizagem autorregulada da leitura: Resultados positivos de uma intervenção psicopedagógica [Self-regulated learning in reading: Positive results of a psychopedagogical intervention]. *Psicologia: Teoria e Pesquisa, 27*(3), 291-299. doi:10.1590/S0102-37722011000300004

Joly, M. C. R. A., Bonassi, J., Dias, A. S., Piovezan, N. M., & Silva, D. V. (2014). Avaliação da compreensão de leitura pelo Sistema Orientado de Cloze (SOC) [Reading comprehension evaluation using the Cloze Oriented System (COS)]. *Fractal: Revista de Psicologia, 26*(1), 223-242. doi:10.1590/S1984-02922014000100016

Joly, M. C. R. A., & Piovezan, N. M. (2012). Evaluation of the computerized strategic reading program applied to elementary school students. *Paidéia (Ribeirão Preto), 22*(51), 83-90. doi:10.1590/S0103-863X2012000100010

Kingeski, M. F., & Sisto, F. F. (2004). Reconhecimento de palavras nas séries iniciais do ensino fundamental [Word recognition in the early grades of elementary school]. *Teoria e Prática da Educação, 7*(2), 183-190.

Macedo, A. A., Santos, J. N., Oliveira, A. G., & Martins-Reis, V. O. (2015). Programa fonoaudiológico de promoção do letramento (PFPL): Eficácia na compreensão de leitura em escolares [Speech and language program for   the development of literacy: Reading comprehension efficacy in school children]. *Distúrbios da Comunicação, 27*(2), 248-255. Recuperado de http://revistas.pucsp.br/index.php/dic/article/view/21447

Machado, A. C., & Capellini, S. A. (2014). Tutoring in reading and writing based on the RTI – response to intervention model in children with developmental dyslexia. *Revista CEFAC, 16*(4), 1161-1167. doi:10.1590/1982-0216201415412

Maluf, M. R., Zanella, M. S., & Pagnez, K. S. M. M. (2006). Habilidades metalinguísticas e linguagem escrita nas pesquisas brasileiras [Metalinguistic abilities and written language in brazilian research]. *Boletim de Psicologia, 56*(124), 67-92. Recuperado de http://pepsic.bvsalud.org/pdf/bolpsi/v56n124/v56n124a06.pdf

Oliveira, K. L., Boruchovitch, E., & Santos, A. A. A. (2008). Leitura e desempenho escolar em português e matemática no ensino fundamental [Reading and school performance in portuguese and mathematics in elementary school]. *Paidéia (Ribeirão Preto), 18(41)*, 531-540. doi:10.1590/S0103-863X2008000300009

Pedraza, M. A. G. (2014). *Criterios que orientan a un grupo de docentes para el desarrollo de la comprensión lectora y la competencia escrita en estudiantes de educación básica o media [Criteria guide for teachers to reading comprehension development and writing competition in primary and secondary education students*] (Tese de maestría). Recuperado de http://repository.ucatolica.edu.co/handle/10983/2091

Piovezan, N. M., & Castro, N. R. (2008). Compreensão e estratégias de leitura no ensino fundamental [Comprehension and reading strategies in elementary school]. *Psic: Revista da Vetor Editora, 9*(1), 53-62. Recuperado de http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1676-73142008000100007

Salles, J. F., & Correa, J. (2014). A produção escrita de histórias por crianças e sua relação com as habilidades de leitura e escrita de palavras/pseudopalavras [Children's textual production of stories and their relationship with the skill of reading and writing words/pseudowords]. *Psicologia USP, 25*(2), 189-200. doi:10.1590/0103-6564A20133813

Santos, A. A. A., & Cunha, N. B. (2012). Consciência metatextual: Evidências de validade para instrumento de medida [Metatextual awareness: Evidence of validity for measuring instrument]. *Psico-USF, 17*(2), 233-241. doi:10.1590/S1413-82712012000200007

Santos, A. A. A., & Oliveira, E. Z. (2010). Avaliação e desenvolvimento da compreensão em leitura no ensino fundamental [Assessment and development of reading comprehension with elementary school students]. *Psico-USF, 15*(1), 81-91. doi:10.1590/S1413-82712010000100009

Schneider, A. C. B., Souza, A. P. R., & Deuschle, V. P. (2010). Intervenção fonoaudiológica com gêneros textuais em um grupo de escolares [Speech therapy intervention with textual genders in a group of school age children]. *Revista CEFAC, 12*(2), 337-345. doi:10.1590/S1516-18462010000200022

Sisto, F. F. (2005). *Escala de Avaliação da Escrita (EAVE) [Writing Assessment Scale]* (Relatório Técnico). Itatiba, SP: Universidade São Francisco.

Sisto, F. F. (2006). Estudo do funcionamento diferencial de itens para avaliar o reconhecimento de palavras [Study of the differential functioning of items to assess word recognition]. *Avaliação Psicológica, 5*(1), 1-10. Recuperado de http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1677-04712006000100002

Sousa, S. Z. (2007). Avaliação, ciclos e qualidade do ensino fundamental: Uma relação a ser construída. *Estudos Avançados, 21*(60), 27-44. doi:10.1590/S0103-40142007000200003

Spinillo, A. G., & Simões, P. U. (2003). O desenvolvimento da consciência metatextual em crianças: Questões conceituais, metodológicas e resultados de pesquisas [Metatextual development in children: Theoretical and methodological overview, and research findings]. *Psicologia: Reflexão e Crítica, 16*(3), 537-546. doi:10.1590/S0102-79722003000300012

Spinillo, A. G., Mota, M. M. P. E., & Correa, J. (2010). Consciência metalinguística e compreensão de leitura: Diferentes facetas de uma relação complexa [Metalinguistic awareness and reading comprehension: Different facets of a complex relationship]. *Educação em Revista,* (38), 157-171 doi:10.1590/S0104-40602010000300011

Sternberg, R. J. (2008). *Psicologia cognitiva [Cognitive psychology]* (R. C. Costa, Trad., 4a ed.). Porto Alegre, RS: Artmed.

Suehiro, A. C. B., & Santos, A. A. A. (2012). Validade concorrente entre instrumentos de avaliação da compreensão em leitura e da escrita [Concurrent validity between assessment instruments in reading comprehension and writing]. *Psicologia Argumento, 30*(68), 131-138. Recuperado de http://www2.pucpr.br/reol/pb/index.php/pa?dd1=5891&-dd99=view&dd98=pb

Taylor, W. L. (1953). Cloze procedure: A new tool for measuring readability. *Journalism Quarterly, 30*(4), 415-433.

Acácia Aparecida Angeli dos Santos is a Full Professor at the Universidade São Francisco.

Neide de Brito Cunha is a Professor at the Universidade do Vale do Sapucaí.

Katya Luciane de Oliveira is a Professor at the Universidade Estadual de Londrina.

Paula Cristina Camargo Osés is graduated in Psychology from the Universidade São Francisco.