

APPLICATION IN THE EDUCATIONAL CONTEXT OF INFORMATIVE AND INSTRUCTIONAL INTERVENTION PROGRAMS FOR THE READING COMPREHENSION OF SCHOOLCHILDREN FROM THE 3RD TO THE 5TH OF ELEMENTARY SCHOOL

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Abstract

Schoolchildren who have reading comprehension difficulties are out of step with their class group. This lag tends to increase over time, as curricular contents increase in quantity and complexity with the passage of school grades. Therefore, it is necessary that these difficulties are remedied so that these schoolchildren can develop academically. This study aimed to compare the performance of schoolchildren from the 3rd to the 5th of Elementary School in the application of two intervention programs in reading comprehension, one informative and the other instructional. A total of 211 schoolchildren from municipal public schools participated, of both genders, aged between eight and ten years and 11 months of age, divided into three groups, GI, GII and GIII. The schoolchildren were submitted to an assessment of reading comprehension and the results were statistically analyzed. The schoolchildren were placed in three types of program, one of control and two of intervention. The schoolchildren in the Control program did not receive specific activities aimed at the use of reading comprehension strategies. Those from the Informative program received mediation from the teacher in the application of strategies and those from the Instructional program were mediated by the teacher and the researcher. These schoolchildren received work-related activities with literal and inferential information on micro and macrostructure. The statistical results indicated that the schoolchildren of the Informative and Instructional programs, submitted to the application of the interventions, obtained superior performance in relation to the schoolchildren of the Control program, not submitted to the Intervention. The results indicated that the schoolchildren presented a lower performance, mainly for the macrostructure inferential questions, as well as indicating that after the application of the programs, the schoolchildren submitted to the intervention activities presented superior performance in reading comprehension regardless of the way in which the programs were applied. Based on the results analyzed, it was possible to conclude that the use of specific strategies aimed at reading comprehension provided significant results for the schoolchildren, since in both programs it was observed that there was an improvement in reading comprehension, although not all groups could benefit. of all proposed activities. There is, therefore, the need for revisions for applications in future studies.

Keywords: *Learning, teaching, reading, reading comprehension, education.*

1. Introduction

Educators and professionals who work with schoolchildren are aware of the difficulties that many of them have in reading comprehension skills (Nicolielo-Carrilho, Crenitte, Lopes-Herrera, & Hage, 2018). These schoolchildren are out of step with their class-group. This gap tends to increase over time, as curricular content increases in quantity and complexity with the passage of school grades (Shannon & Leesa, 2020).

Considering these factors, this study proposed to offer two intervention programs with reading comprehension to be used by teachers in the classroom, one in the form of Informative application and the other in the form of Instructional application.

2. Objective

To compare the performance of schoolchildren from the 3rd to the 5th of Elementary School in the application of two intervention programs, one informative and the other instructional, in reading comprehension.

3. Methods

This research was carried out after approval by the Research Ethics Committee, under protocol 0720/2013, approved on 05/29/2013.

3.1. Participants

A total of 211 schoolchildren from the 3rd to the 5th year of elementary public education participated, from three schools in the interior of the state of São Paulo, of both genders, aged between seven and ten years. The schoolchildren were divided into groups according to their level of education, as follows: GI (3rd year schoolchildren), GII (4th year schoolchildren) and GIII (5th year schoolchildren).

Their performances were compared by school grade and according to the applied program. Thus, the performance of the 3rd year schoolchildren submitted to the application of the information program were compared to the schoolchildren of the same grade, but submitted to the application of the instructional program, as well as both were compared to the 3rd year schoolchildren belonging to the control group.

Therefore, the participating schoolchildren were grouped as follows: Group I (GI): 69 3rd year schoolchildren (20 from the INFO group, 24 from the INST and 25 from the CONT); Group II (GII): 78 4th grade schoolchildren (19 from INFO, 27 from INST and 32 from CONT); Group III (GIII): 73 5th grade schoolchildren (18 from INFO, 26 from INST and 29 from CONT)

Exclusion criteria were: difficulties in decoding, registration of sensory, motor or cognitive impairment in school records and non-presentation of the Free and Informed Consent Form signed by the parents or guardians of the schoolchildren.

3.2. Methodology

The Informative and Instructional Programs were applied using narrative texts with the objective of offering strategies to promote the knowledge of the structural parts of the narrative, the basic elements, the causal relationships, the aspects of information processing (micro and macro structure and perception of coherence, reaching a critical and reflective reading and also expository texts with the aim of developing knowledge of thematic progression, structural organization, aspects of information processing (micro and macro structure), the construction of the macrostructure and self-regulation.

Teachers in the control group (CONT) did not receive any type of guidance on specific and targeted work with reading comprehension, continuing with classroom activities. The teachers of the informative group (INFO) received guidance on the cognitive and metacognitive processes involved in reading comprehension as well as guidance on how to mediate during the application of the strategies provided for specific and directed work with reading comprehension. The orientations were carried out in four four-hour sessions, one session dedicated to the theoretical part and the other three to workshops.

The teachers of the instructional group (INST), in addition to the guidelines received, were helped by the researcher in the mediations in the classroom while working with strategies for reading comprehension. This assistance was intended to resolve doubts and resolve immediate difficulties in mediations. The activities were developed in the classroom by the teacher in 12 sessions, one per week.

All participating schoolchildren underwent reading comprehension assessment after the end of the application of the programs in order to compare the performances of the groups studied.

The schoolchildren were collectively evaluated in the classroom through the Reading Comprehension Assessment Protocol - Procomle (Cunha & Capellini, 2019), with the application of two texts, one narrative and one expository, respectively named TN and TE. Each text contains eight multiple-choice questions, divided between literal and inferential, related to the microstructure and macrostructure of the text.

Data were statistically analyzed using the SPSS statistical program, version 21.0. The Mann-Whitney test was used in order to verify possible differences between the groups studied, with values lower than 5% (0.050) being adopted as a significance level.

4. Results and discussion

For the narrative text (TN), the INFO group, in comparison with the CONT group, benefited from the program, as the three groups presented superior performances for macrostructure inferential questions, corroborating previous studies (Diakidoy, Mouskounti, & Ioannides, 2011; Jiang & Farquharson, 2018).

In comparing the results of the evaluation between the Informative group and the control group for the expository text (ET), it was observed that the GI presented similar performances after the application of the program, suggesting that for this level of education the program was not effective. However, it was found that GII and GIII of the INFO group improved their performance for the inferential and literal macrostructure questions, indicating the use of these schoolchildren in the proposed activities, results that corroborate the study by Shannon and Leesa (2020).

In comparing the results of the evaluation between the Instructional group and the control group for NT, it was observed that the schoolchildren benefited from the program mainly in the questions whose answers required the elaboration of inferences for both micro and macrostructure propositions, data that corroborate studies of Lee (2011), Nicolielo-Carrilho, Crenitte, Lopes-Herrera and Hage (2018) and Novaes, Zuanetti and Fukuda (2019).

In comparing the results of the evaluation between the INST and CONT groups for TE, it was shown that only the IG of the INST group benefited from the application of the program, showing improved performance for questions that required the generation of inferences within the microstructure of the text. Such results were opposite to those presented by the INFO group, as GII and GIII year benefited from the intervention program, but GI did not. Similar data were found by Williams et al., (2014) and Jiang, and Farquharson (2018).

Comparing the results of the evaluation between the INFO group and the INST for TN, it was found that only GII and GIII of the INST group showed an improvement in performance for the literal and inferential questions. While the GI showed a similar performance to the INFO group, suggesting that the direct instructions did not make these schoolchildren perform better.

Comparing the results of the evaluation between the INFO and INST groups for TE, it was observed that GI and GIII of the INST group presented superior performance for the literal and inferential questions of macrostructure, indicating that the direct instructions received had a greater effect than this group. However, the same did not occur for the schoolchildren from GII, who showed similar performance between the groups that received direct instruction and those that did not, suggesting that the way in which the program was applied did not make a difference for this level of education, results according to with studies by Spinillo and Hodges (2012) and Wijekumar, Meyer and Lei (2017).

5. Conclusion

The present study indicated that it was possible to verify the effectiveness of the applied programs, because regardless of the form of application, there was an increase in reading comprehension when comparing the groups submitted to the programs with the non-submitted groups, verifying that when direct strategies were used on knowledge of the explicit and implicit information in the text, as well as the organization of this information, making the student aware of his/her possibility of making relationships between the ideas presented in the text, between new and already acquired knowledge, providing, in this way, retention of the information and, therefore, the realization of their learning.

References

- Cunha, V.L.O., & Capellini, S.A. (2019). *Procomle- Protocolo de avaliação da compreensão de leitura para escolares do 3º ao 5º ano*. Ribeirão Preto: BookToy.
- Diakidoy, I.A.N., Mouskounti, T., & Ioannides, C. (2011). Comprehension and learning from refutation and expository texts. *Reading Research Quarterly*, 46(1):22-38.
- Jiang, H., & Farquharson, K. (2018). Are working memory and behavioral attention equally important for both reading and listening comprehension? A developmental comparison. *Reading and Writing*, 31(7):1449-77. doi: 10.1007/s11145-018-9840-y
- Lee, S.H. (2011). Dynamic testing, working memory, and reading comprehension growth in children with reading disabilities. *Journal Learning Disability*, 44(4):358-71.
- Nicolielo-Carrilho, A.P., Crenitte, P.A.P., Lopes-Herrera, S.A., & Hage, S.R.V. (2018). Relationship between phonological working memory, metacognitive skills and reading comprehension in children with learning disabilities. *Journal Applicant Oral Science*; 26:e20170414. doi: 10.1590/1678-7757-2017-0414.
- Novaes, C.B., Zuanetti, P.A., & Fukuda, M.T.H. (2019). Efeitos da intervenção em memória de trabalho em escolares com dificuldades de compreensão de leitura. *Revista CEFAC*; 21(4): e17918 | doi: 10.1590/1982-0216/201921417918.
- Spinillo, A.G., & Hodges, L.V.S.D. (2012). Análise de Erros e Compreensão de Textos: Comparações entre Diferentes Situações de Leitura. *Psicologia: Teoria e Pesquisa*, 28 (4): 381-388.
- Shannon, S., & Leesa, M. (2020). Explicit Text Structure Instruction Supports Expository Text Comprehension for Adolescents with Learning Disabilities: A Systematic Review. *Learning Disability Quarterly*; 1-14. doi: 10.1177/0731948720906490.
- Wijekumar, G., Meyer, B.J.F., & Lei, P. (2017). Web-based text structure strategy instruction improves seventh graders' content area reading comprehension. *Journal of Educational Psychology*, 109(6), 741-760. <https://doi.org/10.1037/edu0000168>
- Williams, J.P., Pollini, S., Nubla-Kung, A.M., Snyder, A.E, Garcia, A, Ordynans, J.G., & Atkins, J.G. (2014). An intervention to improve comprehension of cause/effect through expository text structure instruction. *Journal of Educational Psychology*, 106(1), 1-17. <https://doi.org/10.1037/a0033215>.