Bellaterra Journal of Teaching & Learning Language & Literature
Vol. 11(2), May-June 2018, 74-90

The impact of a writing programme on reading acquisition of at-risk first grade children

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(Text received March 25, 2018; accepted April 15, 2018)
DOI: http://doi.org/10.5565/rev/jtl3.772

Abstract: Our aim was to assess the impact of a writing programme on the reading acquisition of first graders considered at-risk of developing reading difficulties. Eighteen children from six classrooms of three primary schools attended this programme. Their results on literacy tests at the end of the first trimester were very low when compared to those of the remaining 91 children attending the same classrooms. This programme, based on a socio-constructive approach, had 12 sessions. In each session, children were asked to discuss the writing of words and sentences until they reached an agreement. The adult's role was to guide and question children along their process of discovery and reflection. The dynamics that occurred during the sessions and the adult's help (scaffolding) were characterized. At the end of the programme, children who underwent the intervention reached similar reading results as the remaining children in the classrooms.

Keywords: Reading, learning, writing programme, scaffolding

Resumen: Nuestro objetivo fue evaluar el impacto de un programa de escritura en el aprendizaje de la lectura de niños de primer grado considerados en riesgo de desarrollar dificultades de lectura. Dieciocho niños de seis clases de tres escuelas de Educación Primaria asistieron al programa. Sus resultados en pruebas de alfabetización al final del primer trimestre fueron muy bajos en comparación con los otros 91 niños de las mismas clases. Este programa, con un enfoque socio-constructivista, tuvo 12 sesiones. En cada sesión los niños debatieran sobre la escritura de palabras y oraciones. El papel del adulto era guiar y cuestionar a los niños a lo largo de su proceso de descubrimiento y reflexión. Se analizaron las dinámicas que ocurrieron durante las sesiones y las ayudas del adulto (andamiaje). Al final del programa, los niños que asistieron al programa alcanzaron resultados de lectura similares a los otros niños de las mismas clases.

Palabras-clave: Lectura, aprendizaje, programa de escritura, andamiaje

Resumo: O nosso objetivo foi avaliar o impacto de um programa de escrita na aprendizagem da leitura de crianças do 1º ano de escolaridade em risco de desenvolver dificuldades de leitura. Dezoito crianças de seis turmas de três escolas de 1º ciclo participaram neste programa. Os seus resultados em testes de literacia no final do primeiro trimestre eram muito baixos quando comparados com os das restantes 91 crianças dessas turmas. Este programa, baseado numa perspectiva socio-construtivista, teve 12 sessões. Em cada uma, foi pedido às crianças que discutissem a escrita de palavras e de frases. O papel do adulto foi o de guiar e questionar as crianças ao longo

do processo de descoberta e de reflexão. Analisámos as dinâmicas ocorridas durante as sessões assim como as ajudas do adulto (scaffolding). No final do programa, as crianças que passaram pela intervenção atingiram resultados semelhantes em leitura aos das restantes crianças das turmas.

Palavras-chave: Leitura, aprendizagem, programa de escrita, "scaffolding"

Introduction

Learning to read is often considered a rather simple task that many children acquire easily. However, there are children that have difficulties that prevent them from acquiring reading skills similar to those of children of their age and school year, and which may result in future difficulties in other academic areas with impact on motivation and on learning in general.

In order to overcome the problems presented by children at-risk of reading failure, several investigations involving phonological awareness and reading programmes were developed (e.g. Ball & Blachman, 1988; Bradley & Bryant, 1983; Hatcher, Hulme, & Snowling, 2004). However, these studies have not focused on the advantages of using writing activities to enhance reading acquisition in the beginning of formal schooling. Recent studies have evidenced the causal relationship between early writing activities and later reading acquisition and, consequently, the development of skills that exceed phonological awareness such as alphabetic knowledge and orthographic awareness (e.g., Alves Martins, Albuquerque, Salvador, & Silva, 2013; Alves Martins, Salvador, Albuquerque, & Silva, 2016; Ouellette & Sénéchal, 2008; Sénéchal, Ouellette, Pagan, & Lever, 2012). Writing activities seem to have, therefore, an enormous pedagogical value by promoting reading and writing abilities in children that may, or not, be at-risk of developing learning difficulties in these areas.

Learning how to read and write depends, in great extent, to how well children understand the alphabetical principle, that is, the notion that the sounds of words can be represented by letters in a more or less regular way (Adams, 1998). The difficulty or ease to master these principles depends, in part, on orthographic language characteristics. European Portuguese for instance, has a considerable degree of complexity as a result of various irregularities and inconsistencies. According to Seymour, Aro and Erskine (2003), European Portuguese, although being a language of simple syllabic structure, is a semi-transparent orthography rather than a transparent one. In Portuguese, one letter can code several sounds (e.g., *x* can represent the sound [ʃ] in *xilofone*, [s] in *próximo*, [z] in *exato* or [ks] in *táxi*), or one sound can be coded by several letters (e.g.: the sound [s] can be represented by *s* in *sino*, *ss* in *assobio*, *ç* in *maçã* or *c* in *cesto*).

Chomsky (1971, 1979) was one of the first authors who suggested that the first approach to reading should be through children's own writing attempts. During writing activities, the segmentation of words into sounds and the attempt to match a grapheme to a phoneme helps to promote decoding skills (Frith, 1985). Moreover, when children read what they wrote, they immediately consolidate the association between graphemes and phonemes allowing, in the future, the storage of these words in memory (Lombardino, Bedford, Fortier, Carter, & Brandi, 1997). The teaching and practice of early writing provides, therefore, an appropriate and enriched context for the development of phonological awareness and knowledge of the alphabet, skills that are essential to reading acquisition (Treiman, 1993).

The first studies that involved writing activities prior to formal instruction focused on the analysis of the errors made by children. These errors, as they represent knowledge children already have about writing, constitute an essential tool for understanding children's functioning and processes underlying writing procedures (Bosman & Van Orden, 1997). This developmental approach to literacy breaks with the traditional conception that the acquisition of the multifaceted processes implicit in reading and writing is intrinsically dependent on formal teaching (Tolchinsky, 2004, 2016).

According to Ferreiro (1988) and Ferreiro and Teberosky (1979) all children have some knowledge about the writing system, which must be valued and should serve as a starting point for any future learning. Ferreiro (1994, 2002) and Vernon and Ferreiro (1999) showed that writing activities are, in fact, a privileged way to promote metalinguistic reflection and to understand the relationship between oral and writing units that underlie the alphabetic principle.

> Lo que estamos proponiendo, para el aprendiz que es hablante de una lengua con una representación alfabética de la misma, es un proceso dialéctico a múltiples niveles donde, para empezar, el objeto lengua no está dado. Ese objeto debe ser construido en un proceso de objetivación, proceso en el cual la escritura provee el punto de apoyo para la reflexión. Tampoco las unidades de análisis están dadas; ellas se redefinen continuamente, hasta corresponder (aproximadamente) con las que define el sistema de representación. (Ferreiro, 2002, p. 167).

Ferreiro's work has inspired many other studies in other languages and sociocultural contexts, such as Portuguese (e.g., Alves Martins & Quintas Mendes, 1987; Alves Martins & Silva, 2006). The innovative method used by Ferreiro and Teberosky (1979) consisted of individual Piagetian interviews that require critical exploration by the child during situations of writing productions, where cognitive conflicts and reflections about his/her own production were promoted.

Recent studies by Alves Martins et al. (e.g. 2013, 2016, 2017) have sought to understand and establish relationships between preschool children's writing programmes and reading acquisition, carried out individually or in small groups. These studies, following those by Clarke (1988), Rieben, Ntamakiliro, Gonthier, & Fayol (2005) and Ouellette and Sénéchal (2008), have contributed to the acknowledge that writing activities have great impact on reading acquisition, supporting the theoretical assumptions that there is a causal relationship between writing and reading and that they are interdependent.

These programmes, based on constructivist and socio-constructivist principles intend to promote children's reflection about their own writing and more evolved writings produced by other children, with the help of an adult.

The programmes developed with children in groups also intended to expose children to situations in which it is necessary to build a collective solution to a problem, think together and present ideas about the writing processes, with the guidance or mediation of an adult. According to Teberosky (1982), when children argue in order to reach a final solution to a problem taking other children's opinions into account they actually make a reflective integration instead of a passive acceptance of their arguments. Group programmes also offer the possibility of reaching more children at a time while they are closer to classroom contexts. They promote metalinguistic thinking under the supervision of the adult who constantly evaluate children's difficulties in order to give them the help they need, whenever necessary.

The adult's mediation process used in these programmes that may be fundamental to explain their efficacy consists mainly in the use of scaffolding strategies, that is, the assistance provided to each child, in order that he/she may successfully complete a task that alone she/he would be unable to complete (Wood, Bruner, & Ross, 1976). Insofar as scaffolding consists of a dynamic intervention well aligned with the student's continuous progress, the help or support provided by the teacher depends on a large extent on the characteristics of the situation, the type of task, and the student's responses (Pol, Volman, & Beishuizen, 2010). Knowing when and how to withdraw support is also a basic function of the adult (Cole, 2006) who must master a wide repertoire of scaffolding strategies, adapting them as much as possible to the different needs of each child (Pentimonti & Justice, 2010).

In a recent study carried out by Alves Martins, Salvador, Albuquerque and Montanero (2017) the authors analyzed and characterized the strategies used by the adults during a writing programme to help children to think about their written productions facilitating, thus, the development of reading and writing skills. The results show a predominance of questioning strategies, especially those that promote children's thinking and reasoning about

phoneme-grapheme correspondences. The authors also described many procedural elaborations that provided modeling of the procedures to adopt in order to write words, namely, linguistic procedures. One feature that clearly characterizes these programmes is the residual occurrence of instructions/corrections. It is important to note that the amount of help needed by the children substantially decreased along the programmes, which suggest that children internalize procedures and require less guidance or mediation from the adult, passing on the control of the learning process to them. With this study, is was possible to state the idea that programmes like this are not limited to direct instruction and involve complex scaffolding processes, which can, along with the promotion of diversified psycholinguistic abilities, be the basis of its success (Cubero, 2005).

The main purpose of the present study is to assess the impact of a writing programme carried out with children attending first grade at risk of developing learning difficulties on their word reading ability and to analyse the scaffolding strategies used by the adult during the intervention sessions. Several studies were developed in Portugal with pre-school children (e.g. Alves Martins, 2013, 2016, 2017) but none with children at-risk of reading failure in the initial year of formal schooling.

Method

Design. This was an intervention study that was developed in different phases: In the first, there was an initial assessment of all the children that attended six classes of the first grade of the primary schools that participated in this study (N=109). Children at-risk of having reading problems were selected (N=18). In the second phase, these children underwent a writing programme for six weeks (twice a week). In the third phase, there was a final assessment of the reading performance of all children (N=109).

Participants. Participants were 109 children who attended six classes of three public primary schools in the Lisbon area. Eighteen children (9 boys and 9 girls), were considered at-risk of developing reading difficulties by their teachers at the end of the first trimester. Their phonological awareness, alphabet knowledge and word reading performance when compared with those of the other children who attended these classes was very low as can be seen in Table 1. Their age was equivalent, and their mother's academic level was lower when compared to the other children as can also be seen in Table 1.

The descriptive statistics (means and standard deviations) in terms of age, mother academic level, letter knowledge, phonological awareness and word reading either for the

children at risk of reading failure (writing programme) and for the remaining children in the different classrooms (class) are shown in Table 1.

Table 1. Descriptive statistics for age, mother academic level, letter knowledge, phonological awareness and word reading.

	Age (months)		Mother's Academic Level		Letter Knowledge		Phonological Awareness		Word Reading	
	M	SD	M	SD	M	SD	M	SD	M	SD
Writing programme	80.00	2.91	11.72	3.32	12.50	3.60	1.33	1.24	2.28	2.11
Class	80.07	3.33	14.31	2.93	19.28	3.95	8.00	4.72	10.23	3.89

The 18 children at-risk of reading failure underwent a writing programme in pairs in order to improve their writing and reading abilities.

Measures. Letter knowledge was assessed by Test 4 (reading of letters) and Test 8 (writing of letters) from ALEPE (European Portuguese Reading Assessment Battery, 2011). In Test 4 the child was asked to read all 23 letters from the alphabet, presented randomly in the computer, excluding k, w, y (letters that are not usually used in Portuguese words). Test 8 is similar to test 4 but instead of reading, the child was asked to write down a sequence of letters dictated. The maximum score for each test was 23 points.

To assess children's *phonemic awareness*, we used two phonemic sub-tests from Sim-Sim's (2006) phonological battery tests of ALO (Oral Language Assessment), the reconstruction and segmentation tests. Thus, in the phonemic reconstruction task children were asked to say the word that was given to them by the adult already segmented in phonemes while in the segmentation task children should themselves decompose a word in phonemes. Each task consisted of 10 items preceded by 2 examples, and every item was scored with 1 point if the child answered correctly and 0 points if the answer wasn't correct so that the lowest score was 0 and the highest 10, for each task.

In order to assess children's ability to *read* we used Test 2, A list (applied to first graders or children of equivalent level) from ALEPE (Sucena & Castro, 2011) which consists in a standardized test of word reading. The words have different levels of orthographic complexity: simple orthographies, that is, words whose grapheme-phoneme correspondences don't change and are, therefore, bi-univocal (e.g., *mota*); consistent orthographies – words with a low level of complexity that include complex graphemes (e.g., "lh") and contextual regularities (e.g., "s" that sounds [z]) that don't admit variations in the way they are read;

inconsistent orthographies – words whose level of complexity is high and that involve lexical and/or morphological knowledge, therefore, not depending on contextual regularities, as the previous ones. In this test, all words are dissyllables with medium level of frequency in Portuguese. It has 18 items preceded by 4 training items: 9 are simple words, 6 consistent words and 3 inconsistent words. We asked the child to, successively, read each word as quickly and accurately he/she could. The maximum score was 18 points, scoring 1 point for each word correctly read and 0 points for a null or incorrect word reading.

Procedure. Children were individually assessed in a quiet room outside the classroom. The initial assessment took place in January and the final one in May, just after the end of the intervention programme.

The writing programme was carried out with children in pairs, during 12 sessions of 20-30 minutes each, twice a week, during March and April.

All the sessions - assessment and intervention programme – were audio recorded for further analysis. A specially trained educational psychologist conducted the intervention sessions.

After transcribing random interaction sessions of different groups, we analyzed them in order to provide a characterization of the strategies the adult used to help children evolve in their writing and the procedures children should be able to internalize once the programme was over. Scaffolding messages or functional units were isolated without losing any information about the context in which they occurred (Coll, Onrubia, & Mauri, 2008). Each support message given by the adult was analyzed, using a system of educational support categories based on the study of Alves Martins et al. (2017).

The writing programme. This programme was designed to lead the children, in pairs, to discover the spelling of different words, to think about the grapheme-phoneme correspondences, to understand and internalize the rules of the written code. The adults' role consisted of questioning the children's ideas, guiding them, making them realize that certain sounds are coded by certain letters, and that, in order to do so, they need to properly isolate the sounds of the spoken words so that they can start using conventional letters in their writing. Although with major differences, this programme was inspired mainly in the works of Ferreiro (1988) and Alves Martins et al. (e.g. 2013, 2016, 2017).

In the beginning of each session, the adult introduced a contextualized activity, such as reading a story, watching a short film, listening to music or watching a music video. These activities provided a context and a meaning to the spelling activity that would follow. After each child was asked to write, in interaction with his/her partner, several single words or short

phrases, and was encouraged by the adult to discuss the spelling of each word and to reach an agreement. Then, the adult showed them the conventional writing of the words and asked them to confront and compare both writings and to give reasons why they thought one was better. The children were never told that the word the adult presented was the correct one in terms of spelling, to encourage them to think about the different spellings. Children had to make their own inferences, to think with their partner and present their own reasons. The adult mediated and guided children's discussions, using both linguistic analysis strategies (drawing attention to some specific sounds, for the use of certain letters or for contextual rules), as well as scaffolding strategies (such as asking questions, getting children to think and reason, providing clues to facilitate inferences, managing the group). The adult always avoided further interference, like teaching or instructing children.

The choice of the words was based on the following criteria: In the first sessions, we used frequent words with a common syllabic structure in Portuguese (consonant-vowel-consonant-vowel) and with regular sound correspondences. The words used in the following sessions were less frequent words with more complex syllabic structures; we also used phrases in order to expose children to some formal aspects of writing that children usually do not master when they enter formal schooling. We made sure that all words were contextualized (came from the materials presented to them in the activity that was previously developed), although we were careful not to expose them to their written form.

An example of an interaction that occurred between two children and the adult during the third session of the writing programme is presented in Appendix I. Children were asked to discuss how to write the title of a song they had previously heard. The adult wrote down in a cardboard the letters children dictated him. The title was "A Dieta do Porco Toneladas" [The diet of the Pig Toneladas] and the transcript presented in Appendix I is only of the words "do Porco".

Results

Reading results at the end of the year. Concerning reading, Table 2 presents the descriptive statistics for the measures of single word reading after the programme, for the children who underwent the writing intervention programme, and for the other children. As shown in Table 1, there was a very big discrepancy between these two groups of children in January. Children at risk of developing reading difficulties had a very low performance in the reading task

before the intervention, being able to correctly read 2 words out of 18 while the remaining children had much better results, being able to read, approximately, ten words.

Table 2. Descriptive statistics for words correctly read by the children of the writing programme and the remaining children in the classrooms after the intervention

	Reading	
	M	*SD*
Writing Programme	12.28	2.40
Class	13.54	3.69

After the implementation of the programme, we can verify that the group that underwent the intervention reached mean values very close to those presented by the remaining children, their performance having improved in a very significant way. There are no statistically significant differences between the two groups $t(107)=-1.39$, $p=.167$. Children who underwent the writing programme were actually able to reach the class level of performance in reading at the end of the programme.

Adult's scaffolding strategies. We isolated different scaffolding strategies used by the adult:

a) *Questioning*, whose main intention is to obtain a response directly related to the task (eg. 8.“ So, POR, how do we write POR?”; 39.“What is this letter, before the C? [points to R]”).

b) *Inferential questioning*, used to make children think about the way words are written (related to procedures or linguistic reasoning), taking into account what the child already knows and giving implicit clues with the purpose of facilitating an inference (e.g. 44. “What letter is written there that we didn't write here?”).

c) *Implicit clues*, that many times follow questions that are, in fact, implicit guidelines for procedures of linguistic analysis, concerning the sounds of the spoken words (e.g. 10. “POOOR”; 41. “PORRRCO”).

d) *Explanation request*, that aims to request for clarification or justification of an idea expressed by the child (e.g. 20.“Why do you think it's the P and the T?”).

e) *Asking for confirmation*, a question directed to the child so that she/he expresses her agreement or disagreement with what was said or written previously (e.g. 24.“He says it's P. Let's agree on the first letter. Do you agree that it is P?”).

e) *Positive feedback*, used to motivate and encourage children to continue the task, decreasing, therefore, the possibility of withdrawal when tasks get more difficult, as well as

increasing children's independence and autonomy by providing a feeling of competency during the completion of the task (e.g. 37."Very well!"; 50."Well done!").

f) *Procedural instruction* that aims to provide the children with explicit procedures that allow him/her to solve the task (e.g. 5. "Let's write PORCO. Say it, PORCO. Let's divide the word. First is POR and then CO.").

g*) Explaining*, that aims to explain or clarify (e.g. 47. "It's R. The R has the sound [r]").

h) *Focusing*, that aims to direct or redirect the attention of the child to a specific part of the task (e.g. 30. "Now, let's focus on the second syllable, CO.").

The first six strategies (low-level of support strategies) were the most frequent. The last three strategies (high- level of support strategies), occurred less frequently and were gradually reduced or exclusively used in moments considered essential for the resolution of the task. They occurred, typically, in the beginning of the programme, when children showed the need for more guidance from the adult and decreased substantially, or even disappeared, in the last sessions.

All scaffolding strategies were adapted to the needs of the children and varied between different groups. Some groups needed a higher level of support than other ones. In all cases, the help of the adult decreased from the first sessions to the last ones, even when the complexity of the writing task increased.

Discussion

The main purpose of our research was to understand if a writing intervention programme, carried out in pairs, with first grade children considered at-risk of developing difficulties in reading acquisition had a positive and significant impact on reading abilities. In fact, the results obtained allow us to state that writing activities, more specifically writing activities based on a constructivist and socio-constructivist approach, designed to act in the zone of proximal development, influence decisively the acquisition of the reading in children at-risk of reading failure. In this sense, following other studies carried out for preschool children, it seems possible to establish an effective relationship between the development of writing activities and reading (Alves Martins et al., 2016; Ouellette & Sénéchal, 2008), even when they are at-risk of reading difficulties (Sénéchal et al., 2012).

We also sought to understand whether the performance in terms of word reading of children that underwent the writing programme improved in a way that made them get closer

to the results displayed by the remaining children in the classrooms. Although the initial performance of the class was much superior to that of the at-risk children the final results clearly point to the fact that children benefited greatly from the writing programme, being able to attain the reading performances of the other children.

These results are similar to those obtained by Clarke (1988), who found that children in classrooms where writing activities were used, as a curriculum resource, systematically obtained higher values in tasks that involved word reading than children in classrooms where such activities were not used. This effect was, in fact, superior in children who had low performance in reading tasks. Therefore, writing activities where children are asked to contact and explore the written code as a way to access the alphabetical principle can be especially beneficial for children with difficulties.

It is important to note that, although these results clearly underline the success of the writing programme in terms of word decoding, we did not measure the reaction times that would help us to complement the information with reading fluency data. In fact, studies indicate that children with difficulties in reading acquisition may easily decode words, depending on their complexity and inconsistency; however, their reading fluency levels are often below to those expected for their age (Lundberg, 2002).

In terms of knowing which strategies were included in the adult's scaffolding repertoire that had the purpose of inducing children thinking, making them argue and cooperatively find together the solution to the problem of writing the words, we found that the strategies more common in this programme were of low-level of support (Pentimonti & Justice, 2010). They mainly consisted in questioning, helping children to make inferences and giving certain linguistic clues as well as providing appropriate positive feedback. These results are in line with those reported by Alves Martins et al. (2017).

It is important to mention that children showed the ability to integrate the procedures modeled by the adult during the sessions. In most cases, less help was needed to perform the task and there was a shift of the control of the task from the adult to the children that, autonomously, begun to employ the linguistic analysis strategies and procedures necessary to write words, without the adult's intervention (Alves Martins et al., 2017). The adult also adapted the strategies taking into account children's needs, making this programme really flexible and responsive in terms of individual differences.

The appropriateness of the scaffolding strategies used by the adult is one of the essential characteristics of this programme that may have boosted the impact on reading skills. By providing the child to become more autonomous, in control, and inducing self-

regulation abilities, this writing programme has proved educational value and can be an effective alternative or resource for children who are potentially at-risk of reading failure.

Finally, we point out some limitations to our study. Firstly, although our aim was to assess the impact of the writing programme on reading, it would have been of interest to have final measures of phonological awareness and writing of both at-risk children and classroom children in order to compare them and evaluate if the impact of the writing activities on these abilities were the same as for reading. Secondly, as we already stated, we have not assessed children's reading fluency. Thirdly, we did not analyze the interactions that occurred during the sessions between the children, which might be relevant to understand which dynamics can lead to better results. Regarding the educational implications of this study, we think it would be interesting to adapt this type of programme to more naturalistic contexts, so that teachers can implement them in their classes; we also think that the scaffolding strategies used in this programme should be incorporated on teacher initial and in-service training, as they are valuable tools to promote successful learning for all students.

Acknowledgments

This research was made possible through a grant from the Foundation for Science and Technology, Portugal, SFRH/BD/90452/2012.

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Appendix I

Transcription of an interaction between two children and the adult in the 3rd session

1. *Adult* - And now another word: DO.
2. *Child 1* - It's D and U.
3. *Child 2* - No, no. (thinks for a while). Ah, yes it's D and U.
4. *Adult* - Like this? (Writes D and U).
5. *Adult* - Let's write PORCO. Say it, PORCO. Let's divide the word. First is POR and then CO.We are now writing POR.
6. *Child 2* - It's the P and the O, PORCO, and then it's the U.
7. *Child 1* - Wait, let me divide the word: POR-CO.
8. *Adult* - So, POR, how do we write POR?

9. *Child 1* - It's the P and the U.
10. *Adult* - POOOR.
11. *Child 2* - No, it's not P and U.
12. *Adult* - POR. But do you agree that it has a P?
13. *Child 2* - No, I do not agree.
14. *Adult* - Say POR.
15. *Child 1* - It's P.
16. *Adult* - Let Catarina say.
17. *Child 2* - POR.
18. *Adult* - Do you hear the sound of the P?
19. *Child 2* - It's the P and the T.
20. *Adult* - Why do you think it's the P and the T? Listen carefully: POR, do you hear the sound [t]?
21. *Child 2* - Wait, no, I was wrong.
22. *Adult* – So, what's the first letter?
23. *Child 1* - It's P.
24. *Adult* - He says it's P. Let's agree on the first letter. Do you agree that it is P?
25. *Child 2* - Starts with P.
26. *Adult* - And then?
27. *Child 1 and Child 2* - It's the O.
28. *Adult* – It's the O? [Writes down the O]. POR-CO.
29. Now, let's focus on the second syllable, CO.

[They continue to write the rest of the word PORCO and afterwards the adult shows the conventional writing of the part of the title they had just written never saying that it is the correct one and asks the children to confront both writings. Children had written "DU POCO" and the correct writing should have been "DO PORCO"]

30. *Adult* – DO, is it the same as ours or is it different?
31. *Child 1* – It should be the O and not the U.
32. *Adult* - And why did we write U?
33. *Child 1* - It's wrong.
34. *Child 2* - It's wrong because U can only be read in a way [u] and O can be read in ...
35. *Child 1* – The O can be read in two ways.
36. *Child 2* - It can be read in three ways: it is [o], [u] and [ô].

37. *Adult* - Very well! And now, in the word PORCO. What is there (points out to the correct writing) that is not here [points out to children's writing]?
38. *Child 1* - Let's see, let's see ...
39. *Adult* – What's this letter, before the C? [points to R]
40. *Child 2* - It's R.
41. *Adult* -PORRRCO. Do you hear the [r] that the R has? PORRRCO.
42. *Child 1* - Yes.
43. *Child 2* - But we do not say "poreco". It is called "porco".
44. *Adult* - Catarina, say PORCO. We say the sound [r] so fast we can barely hear it. What letter is written there that we didn't write here?
45. *Child 1* – It's the R.
46. *Adult* - It's R. The R has the sound [r].
47. *Child 1* – Does it?
48. *Child 2* - Yes, Diogo, it does.
49. *Child 1* - I thought it was the sound [R].
50. *Adult* – Ok, kids. Well done!

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To cite this article:
Salvador, L. & Alves Martins, M. (2018). The impact of a writing programme on reading acquisition of at-risk first grade children. *Bellaterra Journal of Teaching & Learning Language & Literature*, *11*(2), 74-90. DOI: http://doi.org/10.5565/rev/jtl3.772