

## Chapter #12

### EMERGENT LITERACY STIMULATION IN INITIAL YEARS OF LITERACY

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#### ABSTRACT

This study focus on verify the educational efficacy of a stimulation program with emergent literacy practices with students in the initial literacy series. **Materials and Methods:** The study included 20 students from the 1st and 2nd year of Elementary School I of a municipal public school, of both sexes. The students were divided into two groups, with group I (GI) consisting of 10 students, aged 6 years to 6 years and 11 months, five 1<sup>st</sup> year students and five 2<sup>nd</sup> year students undergoing the training program. stimulation and group II (GII) consisting of 10 students, aged between 6 years and 6 years and 11 months, five 1st year students and five 2nd year students not subject to the stimulation program. The results revealed that GI students had better performance in skills considered predictive of reading development, such as copying shapes, dictating pictures, segmenting syllables, dictating words, repeating words, alliteration, rhyming, repeating numbers in reverse order and naming digits in order fast and automatic, while GII students also performed better in copying shapes, dictating figures and segmenting syllables.

*Keywords:* literacy, learning, reading, emergent literacy.

#### 1. INTRODUCTION

Literacy is a social construction, mediated by language, therefore, it is characterized by being inseparable from cultural and linguistic practices, as well as power relations in specific contexts (Gillen & Hall, 2003). In this way, literacy is molded and developed in the individual due to the different experiences that will be established throughout life (Gomes & Lima Santos, 2004).

The promotion of literacy must occur very early, even in the period of Early Childhood Education and in the initial literacy grades, this is because, when addressed in the educational context, literacy takes on a new concept, the concept of emerging literacy, which is characterized by being a process based on experiences, practices and interactions with written language, which when positive, allow the development of speaking, reading and writing skills in the early years of literacy (Dougherty, 1999, Smith & Dickinson, 2002, Roskos, Christie & Richgels, 2003).

Unlike what happens with the development of oral language, which arises spontaneously as the growth and maturation of the central nervous system and interaction with the environment, the development of written language is the product of a deliberate effort, which requires academic instruction. gradual and systematic. It is in this context of difference between the development of oral language, which evolves naturally and implicitly, and the development of written language, which needs to be learned explicitly, that the acquisition and development of reading and writing presents itself. as a non-spontaneous

process and, therefore, susceptible to the occurrence of difficulties during the teaching-learning process (Gomes, 2001).

International studies have highlighted that academic, personal and even professional failure can result from these learning difficulties when there are low levels of literacy and emerging literacy (Darcovich, 2000, OECD, 2003, Gave, 2004, Resende & Figueiredo, 2018).

Literacy intervention should occur in Early Childhood Education, when literacy is treated in the educational context, it assumes a new concept, the concept of emergent literacy, which is characterized by being a process based on experiences, practices and happiness with written language, which when positive, allow the development of speaking, reading and writing skills in the Early Childhood Education period (Dougherty, 1999, Smith & Dickinson, 2002, Roskos, Christie & Richgels, 2003).

## 2. BACKGROUND

In the literature, there is a description of two theories that support the understanding of emergent literacy. The first theory developed by Whitehurst and Lonigan (1998) concerns the classification of emergent literacy and the second theory Sénéchal, Lefreuve, Smith-Chant, and Coton (2001) describes the dimensions of emergent literacy.

According to Whitehurst and Lonigan (1998) emergent literacy can be classified into two domains, exterior-interior and interior-exterior. The outer-inner domain includes behaviors that encompass the child's knowledge about contextual factors in which reading and writing occur, for example, vocabulary, conceptual knowledge, and narrative schemes. The inner-outer domain considers children's knowledge about the rules of correspondence between the writing system and its sounds, for example, this dimension includes knowledge about the names of letters and sounds, spelling ability, syntactic and phonological awareness.

Sénéchal et al. (2001) described a different conception of the concept of emergent literacy proposed by Whitehurst and Lonigan (1998). For Sénéchal et al. (2001) there are two dimensions, the first being conceptual knowledge and the second being procedural knowledge. Conceptual knowledge is the child's knowledge about the functions of writing and perception of themselves as a reader. Procedural knowledge is the child's knowledge of the mechanisms of reading and writing, for example, knowing the name and sound of letters.

Despite these two different conceptions, both authors consider that emergent literacy develops the child's knowledge about the mechanisms of reading and writing, as the name and sound of letters.

Unfortunately, emergent literacy practices are not carried out in the context of classrooms in Brazil and, therefore, it is not possible to know for sure which of the strategies foreseen in emergent literacy stimulation are used by the teacher with students at the beginning of literacy.

With the advent of the COVID-19 pandemic, social isolation was imposed as a measure to prevent and mitigate the virus and, among these measures, the suspension of in-person classes and remote teaching, therefore, the experience of Brazilian schoolchildren in the first two initial years of literacy were carried out remotely and, due to social and educational discrepancies, we know that this teaching was not carried out in an equal or homogeneous way among the students public and private education systems (Camacho, Joaquim, Menezes, & Sant'Anna, 2020).

Due to this pandemic situation, we are aware that emerging literacy was not properly experienced by students in the 1st and 2nd year of literacy, therefore, this study aimed to verify the educational effectiveness of the stimulation program with emergent literacy practices in students in the initial literacy phase.

### 3. OBJECTIVES

This study aimed to verify the educational efficacy of the stimulation program with emergent literacy practices with students in the 1st and 2nd year of Elementary School I.

### 4. METHODS

#### 4.1. Participants

This study was approved by the Research Ethics Committee of the University (4.862.668). This is a prospective cross-sectional cohort study, consisting of a convenience sample. The study included 20 students aged 6 to 7 years and 11 months from the 1<sup>st</sup> and 2<sup>nd</sup> years of Elementary School I of a Brazilian municipal public school with lower-middle socioeconomic status, distributed in:

**Group I (GI):** 10 students, of both genders, aged between 6 years and 7 years and 11 months, with five students from the 1<sup>st</sup> year and five students from the 2<sup>nd</sup> year submitted to the stimulation program.

**Group II (GII):** 10 students, of both sexes, aged between 6 years and 7 years and 11 months, five of which were in the 1<sup>st</sup> year and five in the 2<sup>nd</sup> year not submitted to the stimulation program.

#### 4.2. Materials and Procedures

All students in this study were submitted the Cognitive-Linguistic Skills Assessment Protocol for Students in the Initial Literacy Phase (Silva & Capellini, 2019) in a pre and post-testing situation for the application of the Emerging Literacy Practice Stimulation Program. The stimulation program consisted of 8 books from the Stories Collection for the Development of Rhyme and Alliteration (César, Santos & Capellini, 2019).

The choice of this book collection is because it offers the stimulation of reading skills associated with the ability to rhyme, alliterate and knowledge of writing through facilitating factors for the development of reading and writing, as proposed by Ellis (1995) and Alves (2012):

- Lexicality: words belonging to children's vocabulary that will allow quick understanding of lexical vocabulary, including words that rhyme;
- Frequency: increased frequency of occurrence of written words that favor the development of orthographic lexical memory;
- Regularity: offering written words with a regular syllabic structure to favor the mastery of direct letter-sound knowledge and, successively, offering written words with greater complexity of syllabic structure for the development of orthographic lexical memory of irregular words for the conversion mechanism letter-sound.

Each session was held in a group composed of 5 students, once a week at the end of the school shift, as authorized by the school board to carry out this study. The stimulation time with each group was 40 minutes. In total, each group was exposed to 8 stimulation sessions, once a week.

After completing the eight sessions of the Emergent Literacy Practice Stimulation Program, all students were once again subjected to the application of the Cognitive-Linguistic Skills Assessment Protocol for Students in the Initial Literacy Phase (Silva & Capellini, 2019) to verify the educational effectiveness of the program carried out.

The results were statistically analyzed using Cochran's 'Q' Statistical Test, in order to compare the results of the pre- and post-application of the Emerging Literacy Practices Stimulation Program. The IBM SPSS Statistics (Statistical Package for the Social Sciences) program, version 25.0, was used to obtain and analyze the results and verify the educational effectiveness of the systematized program. Statistically significant data were marked with an asterisk in the tables.

### 5. RESULTS

Table 1 presents the comparison between the performance of students from GI and GII in the subtests of the Cognitive-Linguistic Skills Assessment Protocol for Students in the Initial Literacy Phase (Silva & Capellini, 2019) in a pre- and post-test situation.

*Table 1.*  
*Performance of Students in the Cognitive-Linguistic Skills Assessment Protocol pre and post stimulation program of literacy.*

SUBTESTS	Categories	GROUPS					
		I			II		
		Freq.	Perc.	Sig. (p)	Freq.	Perc.	P value
EDNPRE	1	0	0,00%	2	20,00%	0,317	
	2	6	60,00%	4	40,00%		
	3	4	40,00%	4	40,00%		
EDNPOS	1	0	0,00%	1	10,00%	0,317	
	2	6	60,00%	4	40,00%		
	3	4	40,00%	5	50,00%		
EASPRE	0	1	10,00%	1	10,00%	0,180	
	1	1	10,00%	1	10,00%		
	2	1	10,00%	0	0,00%		
EASPOS	3	7	70,00%	8	80,00%	0,180	
	2	1	10,00%	2	20,00%		
	3	9	90,00%	8	80,00%		
CFPRE	1	3	30,00%	2	20,00%	0,046*	
	2	7	70,00%	7	70,00%		
	3	0	0,00%	1	10,00%		
CFPOS	1	0	0,00%	1	10,00%	0,034*	
	2	7	70,00%	5	50,00%		
	3	3	30,00%	4	40,00%		
DPPRE	0	4	40,00%	2	20,00%	0,180	
	1	2	20,00%	3	30,00%		
	2	3	30,00%	4	40,00%		
DPPOS	3	1	10,00%	1	10,00%	0,034*	
	0	3	30,00%	2	20,00%		
	1	0	0,00%	2	20,00%		
DPPRE	2	3	30,00%	4	40,00%	0,317	
	3	1	10,00%	1	10,00%		
	0	3	30,00%	2	20,00%		
DPPPOS	1	2	20,00%	3	30,00%	0,317	
	2	3	30,00%	4	40,00%		
	3	4	40,00%	4	40,00%		
DFPRE	0	4	40,00%	2	20,00%	0,034*	
	1	0	0,00%	3	30,00%		
	2	4	40,00%	4	40,00%		
DFPOS	3	2	20,00%	1	10,00%	0,023*	
	0	3	30,00%	2	20,00%		
	2	0	0,00%	2	20,00%		
DN PRE	3	7	70,00%	6	60,00%	0,034*	
	1	1	10,00%	3	30,00%		
	2	5	50,00%	3	30,00%		
DN POS	3	4	40,00%	4	40,00%	0,317	
	1	2	20,00%	3	30,00%		
	2	4	40,00%	3	30,00%		
RASPRE	3	4	40,00%	4	40,00%	> 0,999	
	3	10	100,00%	10	100,00%		
	3	10	100,00%	10	100,00%		
RASPOS	3	10	100,00%	10	100,00%	> 0,999	
	3	10	100,00%	10	100,00%		
	3	10	100,00%	10	100,00%		
RAOAPRE	2	0	0,00%	1	10,00%	0,317	

Emergent Literacy Stimulation in Initial Years of Literacy

SUBTESTS	Categories	GROUPS					
		I			II		
		Freq.	Perc.	Sig. (p)	Freq.	Perc.	P value
RAOAPOS	3	10	100,00%	9	90,00%	0,083	
	3	10	100,00%	10	100,00%		
	0	6	60,00%	6	60,00%		
LPPRE	1	1	10,00%	0	0,00%	0,083	
	3	3	30,00%	4	40,00%		
	0	3	30,00%	3	30,00%		
LPPPOS	1	1	10,00%	3	30,00%	0,083	
	2	1	10,00%	0	0,00%		
	3	5	50,00%	4	40,00%		
LPPPRE	0	6	60,00%	6	60,00%	0,083	
	1	0	0,00%	1	10,00%		
	2	1	10,00%	0	0,00%		
LPPPOS	3	3	30,00%	3	30,00%	0,083	
	0	3	30,00%	3	30,00%		
	1	0	0,00%	4	40,00%		
RPRE	2	1	10,00%	0	0,00%	0,102	
	3	6	60,00%	3	30,00%		
	0	1	10,00%	2	20,00%		
RPOS	1	1	10,00%	0	0,00%	0,004*	
	2	7	70,00%	7	70,00%		
	3	1	10,00%	1	10,00%		
APRE	1	0	0,00%	1	10,00%	0,063	
	2	2	20,00%	7	70,00%		
	3	8	80,00%	2	20,00%		

  

SUBTESTS	Categories	GROUPS					
		I			II		
		Freq.	Perc.	Sig. (p)	Freq.	Perc.	P value
APÓS	1	1	10,00%	1	10,00%	0,038*	
	2	5	50,00%	2	20,00%		
	3	0	0,00%	2	20,00%		
SSPRE	0	0	0,00%	1	10,00%	0,024*	
	1	1	10,00%	3	30,00%		
	2	3	30,00%	4	40,00%		
SSPOS	3	6	60,00%	2	20,00%	0,038*	
	0	2	20,00%	3	30,00%		
	1	0	0,00%	1	10,00%		
DSPRE	2	4	40,00%	3	30,00%	0,102	
	3	4	40,00%	3	30,00%		
	1	0	0,00%	1	10,00%		
DSPOS	2	1	10,00%	3	30,00%	0,083	
	3	9	90,00%	6	60,00%		
	0	2	20,00%	2	20,00%		
RPPRE	1	1	10,00%	0	0,00%	0,025*	
	2	2	20,00%	5	50,00%		
	3	5	50,00%	3	30,00%		
DSPOS	2	3	30,00%	4	40,00%	0,157	
	3	7	70,00%	4	40,00%		
	0	0	0,00%	1	10,00%		

  

SUBTESTS	Categories	GROUPS					
		I			II		
		Freq.	Perc.	Sig. (p)	Freq.	Perc.	P value
RPPPOS	1	1	10,00%	1	10,00%	0,317	
	2	2	20,00%	4	40,00%		
	3	7	70,00%	5	50,00%		
RNPPRE	0	0	0,00%	1	10,00%	0,025*	
	1	1	10,00%	0	0,00%		
	2	2	20,00%	1	10,00%		
RNPPPOS	3	7	70,00%	8	80,00%	0,034*	
	1	0	0,00%	1	10,00%		
	2	2	20,00%	1	10,00%		
RNOIPRE	3	8	80,00%	8	80,00%	0,102	
	0	1	10,00%	4	40,00%		
	1	5	50,00%	4	40,00%		
RNOIPOS	2	2	20,00%	2	20,00%	0,059	
	3	2	20,00%	7	70,00%		
	0	2	20,00%	0	0,00%		
RANFPRE	1	2	20,00%	7	70,00%	0,102	
	2	6	60,00%	2	20,00%		
	3	2	20,00%	1	10,00%		
RANFPOS	0	0	0,00%	1	10,00%	0,157	
	1	2	20,00%	3	30,00%		
	0	0	0,00%	1	10,00%		

  

SUBTESTS	Categories	GROUPS					
		I			II		
		Freq.	Perc.	Sig. (p)	Freq.	Perc.	P value
RANFPOS	2	5	50,00%	3	30,00%	0,059	
	3	3	30,00%	3	30,00%		
	1	1	10,00%	3	30,00%		
RANDPRE	2	3	30,00%	1	10,00%	0,102	
	3	6	60,00%	6	60,00%		
	1	5	50,00%	6	60,00%		
RANDPOS	2	4	40,00%	4	40,00%	0,157	
	3	1	10,00%	0	0,00%		
	1	3	30,00%	3	30,00%		
MVFPRE	2	3	30,00%	5	50,00%	0,102	
	3	4	40,00%	2	20,00%		
	1	3	30,00%	3	30,00%		
MVFPOS	2	4	40,00%	4	40,00%	0,157	
	3	3	30,00%	3	30,00%		
	1	0	0,00%	2	20,00%		
MVFPOS	2	6	60,00%	4	40,00%	0,157	
	3	4	40,00%	4	40,00%		
	0	0	0,00%	1	10,00%		

## 6. FUTURE RESEARCH DIRECTIONS

The number of subjects in this study was small, which may be a limiting factor for the generalization of its findings, however, this is one of the first Brazilian studies with emergent literacy, which in this way may contribute to the need to discuss these practices in classroom.

The analysis of the results, both from GI and GII, reveals that some emergent literacy skills are developed in the classroom, even if Brazilian teachers do not make a direct relationship with the predictors for literacy or with emergent literacy, revealing that these skills are intuitively stimulated in the classroom context. However, this study revealed that not all emergent literacy skills are systematically stimulated in the classroom, especially those that have an impact on reading development, such as use of the letter-sound conversion mechanism, important mechanism to development of reading highlighting the need for teacher training studies to discuss emerging literacy practices in the classroom.

## 7. DISCUSSION AND CONCLUSIONS

The data from this study revealed that GI students submitted to the stimulation program with emergent literacy showed better performance in skills considered predictors for the development of reading, such as copying shapes, dictating pictures, segmenting syllables, dictating words, repeating words, alliteration, rhyme, repeating numbers in reverse order, and fast auto naming of digits.

The fact that the students in GI showed improvement in metaphonological skills (rhyme, alliteration, and syllabic segmentation) is coherent because the focus of the stimulation program was precisely to develop skills related to the proper use of the letter-sound conversion mechanism, thus developing the phonological pathway for reading development; this is because the choice of stories used for the program contained facilitating factors for reading and writing development (Ellis, 1995; Alves, 2012).

Metaphonological skills, phonological working memory and speed of access to the mental lexicon, also called phonological processing skills, are considered predictors for the development of the alphabetic principle, since they are considered central phonological mechanisms in the acquisition of reading and writing (De Jong & Van der Leij, 1999; Dougherty, 1999, Smith & Dickinson, 2002, Roskos et al., 2003).

Tasks that involve the stimulation of visual-motor perception, such as copying shapes, rapid fusion in succession of stimuli, such as syllabic segmentation, dictation and word repetition, metaphonological skills, such as rhyme, alliteration and syllabic segmentation, phonological working memory, such as the repetition of digits in reverse order and speed of access to the mental lexicon such as rapid automatic naming of digits, are necessary for learning to read as they involve both the perception of details of the letter's layout, and the auditory perception of ordering temporal of the acoustic stimuli that will be converted into letters and, both perceptions help in the development of the letter-sound conversion mechanism necessary for reading in an alphabetic writing system, such as Brazilian Portuguese (Silva & Capellini, 2019).

However, among the students from the GII, also showed better performance in skills considered predictors for the development of reading, such as copying shapes, dictating pictures, and segmenting syllables, showing that the students' improvement of GI in these skills cannot be attributed to the program, since the school also offered educational strategies in the classroom that enabled students to develop these skills.

The fact that there were no statistically significant levels in the reading subtests or in the other subtests of the protocol used for assessment at both moments of the study does not invalidate the importance of these findings. On the contrary, it reinforces the need to carry out new studies with a greater offer of stimulation with emerging literacy, to verify the occurrence of changes in performance in cognitive-linguistic skills of students in the initial phase of literacy because of more frequent stimulation. and with a longer duration of the proposed activities.

The study also highlights more than an educational problem, since the COVID-19 pandemic resulted in the blocking of access to school and increased a gap in the exposure of the little ones to emergent literacy practices in Early Childhood Education, reconfiguring the education system, society and consequently demonstrating that speech-language pathology professional, both from a clinical and educational perspective, is necessary, mainly to combine the areas of Education and Health. From the results of this study, we concluded that GI students submitted to the emergent literacy stimulation program showed better performance in skills considered predictive of reading development, such as copying shapes, dictating figures, segmenting syllables, dictating words, repeating words, alliteration, rhyme, repetition of numbers in reverse order and rapid automatic naming of digits.

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