

The Outcomes Of Learning To “Read And Write With All Senses”: The Use Of A Multisensory Methodology

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Session Information

27 SES 16 B, The Outcomes Of Learning To “Read And Write With All Senses”: The Use Of A Multisensory Methodology

Research Workshop

Time: 2019-09-06
13:30-15:00

Room: VMP 5 - Room 2101

Chair: Catarina Santos

Contribution

Researching teaching methodologies that enable children to achieve academic success is a matter of great importance because learning difficulties, namely reading and writing difficulties, are common in today's education institutions.

Knowledge of the complete phonemic code, namely grapheme-phoneme correspondence is one of the essential foundational skills for reading success (Morais, 1997, cit. in Esteves, 2013). To master the phonemic code is an essential skill that students must develop, in order to acquire the reading-writing process. Decoding and understanding are crucial to a meaningful reading comprehension process.

Some children struggle with difficulties in learning to read and write. Among them, there are children with intellectual disabilities. They often have problems with general mental abilities that affect intellectual functioning (such as learning, problem solving, judgement) and adaptive functioning (such as communication and independent living) (APA, 2014). One of the three areas of adaptive functioning is the conceptual domain (language, reading, writing, math, reasoning, knowledge, memory). Mild levels of intellectual disability may not be identified until school age, when a child may show difficulties in

acquiring different skills, namely learning how to read and write.

One of the reasons argued for this effortful learning may be in the nature of the audiovisual process that is recruited for the integration of principle arbitrarily linked elements (Blomert & Froyen, 2010).

There is a range of models, methods, and processes for teaching and learning we must know so that we can select and adapt them to each child, according to their needs.

The multisensory methodology integrates strategies in its structure that include a greater number of sensory aids, like visual and audition aids – the most commonly used – as well as kinesthetic and tactile. The increase of this type of aid works as a compensation technique which allows the child to achieve a greater probability of success (Seabra & Dias, 2011). The relation between phoneme and grapheme, during the formal learning of reading and writing is based on a multisensory association, taught in a systematic and formal way that allows the manipulation of those segments, without recurring to higher cognitive processes (Blomert & Froyen, 2010).

Multisensory methods involve the use of all senses. They focus on using visual, auditory, and kinesthetic-tactile elements. They are based on the belief that incorporating all senses into the learning process activates different parts of the brain simultaneously, enhancing memory and the learning of written language. In traditional methodologies, teaching occurs using vision and hearing. In the multisensory methodology there is a recruitment of other sensorial modalities, such as kinesthetic and phono articulatory techniques (Seabra & Dias, 2011).

Studies and reports of the application of this method, in children, demonstrate that this is an effective method in teaching reading and writing skills. Studies in neuroscience and cognition also show the importance of multisensory methods in learning in general (Serra, 2012).

Having this in mind we created a multisensory method named “Read and write with all senses”.

Through the development and implementation of this program, our research project aims at documenting and understanding improvements in reading and writing learning processes in children with intellectual disabilities.

Method

This project's goal was to evaluate changes in the reading and writing learning processes after the development and implementation of a multisensory methodology-based teaching program. Five participants (between the ages of 10 and 11, three girls) were selected, according to the following criteria: 1) existence of intellectual disabilities (APA, 2014); 2) having experienced three or more years of unsuccess in reading and writing; 3) existence of severe learning difficulties in reading and

writing. All children attended regular inclusive school. Using tools such as Infant/Toddler Sensory Profile (ITSP) and evaluation of Language Competencies Evaluation for Reading and Writing (ACLLE-LCERW), we were able to map the sensory profile of each participant and evaluate his/her learning evolution during the program, in phonological awareness, reading and writing domains. The multisensory program was applied in weekly interventions, 45 minutes each, during a four-month period. This method comprises 21 cards containing 21 graphemes to be taught. Each grapheme has only one phonemic representation. The procedure consisted in teaching and modelling grapheme / phoneme representative gesture, and the articulatory points and modes of the associated phoneme. All exercises were always performed with the support of the gesture and its picture: repetition of the gesture by the child, simultaneously naming the phoneme by matching the corresponding image; writing the grapheme; dictation of isolated graphemes; dictation of syllables and words, reading words, writing of simple sentences, with the support of multisensory tracks; spontaneous writing of simple sentences, based on pictures, reading of simple sentences. The various phonetic representations of each grapheme's were intended to be introduced only at the end of the program.

Expected Outcomes

The application of the multisensory program showed improvement in the reading and writing learning of the participants. There was an increase in the number of correct answers in four of the five participants, in the reading processes. However, the writing process was more developed than the reading process, in all participants. There were also improvements in the grapheme's identification and naming. It is also worth mentioning that, despite not a goal of this research, there was also an increase in the phonological awareness of all the participants: the number of correct answers shows an increase in all the participants. Learning to spell and learning to read comprise similar learning processes (Moats, 2005). In order to understand reading and writing, it is essential for the child to be able to understand the segmental nature of language (Pugh et al., 2001). This exercise of matching the phoneme with the corresponding grapheme is the basis of the stimulation inherent in this method. It may explain the improvements in the phonological awareness of the participants. The methodology used in this multisensory method is said to be best suited for older children who have already suffered major school failures (Capovilla & Capovilla, 2002). The multisensory methodology requires a greater number of sensorial modalities: tactile, kinesthetic, auditory and articulatory (Seabra & Dias, 2011). The increase of this type of aids proved to work as a compensation technique which stimulated participants to a more active and involved attitude towards their learning. It also allowed them to achieve a greater probability of success in their reading and writing learning processes.

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O método multissensorial no caso português – Uma abordagem possível? (Dissertação de Mestrado, Faculdade de Ciências Sociais e Humanas).

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