
The Role of Short-Term Memory in the Training of the Conference Interpreter. Identification of Obstacles and Development of a Specific Teaching Methodology

*Paula Ortiz**

Universidad del Salvador
Argentina

Norma Alcira Andrada

Universidad del Salvador
Argentina

Florencia de Galvagni

Universidad del Salvador
Argentina

Eliana Heinrich

Universidad del Salvador
Argentina

Agustina Cintia Savini

Universidad del Salvador
Argentina

Rosana Mabel Fernández

Argentina

Jazmín Vives

Argentina

Keywords: Short-Term Memory; Working Memory; Phonological Loop; Memory Flexibility; Association-Dissociation; Mental Agility

* Doctora en Ciencia de la Educación, Traductora Pública en inglés, Traductora Científico-Literaria y Bachiller Superior en inglés por la Universidad del Salvador (USAL). Magister en Administración de Empresas (MBA) por la USAL y la Universidad de Deusto (España). Correo electrónico: portiz@usal.edu.ar
SUPLEMENTO *Ideas*, II, 5 (2021), pp. 29-32

This research project on the training of the conference interpreter is based on three closely related concepts: memory (*short-term memory* and *working memory*), *language* (source language and target language) and *comprehension*. Their interrelation is essential to understand how the brain carries out the cognitive processes of learning. Language is acquired by listening and speaking, what is known as the *phonological loop*. Neuroscience and neuroimaging studies have revealed that a person's mother tongue is processed in the left hemisphere. But the brain areas used for second language learning also require the intervention of the right hemisphere. To develop higher executive functions, basic cognitive functions are required: perception, language, memory and attention. Proper training of these aspects will result in a good-quality interpretation. Thus, a key complement to this research project is fieldwork based on the findings on the cognitive functions of *working memory*, *short* and *long-term memory*, and the *phonological loop* in interpreter training. Fieldwork focuses on the practical application of the *phonological loop* whose function is to temporarily maintain the information that is verbally encoded in the *working memory*. The brain can be exercised like the muscles of the body. Just as physical activity benefits the musculoskeletal apparatus, continuous cognitive stimulation benefits mental flexibility and reduces the response time (*time lag*) that is essential for the interpreter's good performance. Brain plasticity favors the formation of new synaptic connections that strengthen neural networks. Thus, the fieldwork consists of exercises aimed at the flexibilization of the student's working and short-term memory to develop its three primary functions: Concentration - Attention - Retention. To do so, the following is needed:

- 1) the visuospatial agenda: which consists of visualizing the information to be interpreted, for example, a number;
- 2) the phonological loop: information is repeated internally before verbal production;
- 3) the combination of both. Exercises are divided into word level categories: phrase, sentence, paragraph, concrete and abstract stories, individual and combined numbers.

The left and right hemispheres of the brain are trained by:

- a) Writing and drawing with both hands (various exercises);
- b) Different movements with both hands in a mirrored pattern;
- c) Writing or drawing something specific while listening to a story and answering questions about it.

The alternating and divided attention is exercised by:

- a) *Clozing* exercises (anticipation): the student must fill in the blank spaces;
- b) *Mirroring* exercises: the student reads a text that is "upside down" (mirror-writing); first, the student reads the text in the same language, then, he performs a first-sight interpretation of the text.

Synthesis and semantic memory are trained by:

- a) Synthesis exercises. The student reproduces only the main idea. Then, the exercise is repeated to reproduce only key details. Attention is trained to help memorizing, avoiding the distractions that lead to forget or overlook key details.
- b) Exercises of association and dissociation with figures and acronyms that aim at storing information.

The goal is to achieve proficiency in various skills, especially those related to synthesis and semantic memory (resorting to previous knowledge stored in the "database" of long-term memory).

The achievement of a high mental agility of the student is essential, since interpretation is based on a continuous cycle between three functions: input and storage of information in the source language, working memory processing and output of the processed data in the target language, that is to say, verbal production.

