



Speed up your fluency in English with Fast Motor Sequences

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Abstract

Coordination and movement help children to learn better and improve their performance in language learning. Our training platform is based on fast motor sequences, coordination and rhythm to enhance fluency in terms of fluidity, significant improvement in starting the coordinated motor gesture while the child speaks in English.

Thanks to these motor exercises, simultaneous realization of multiple functions both ,cognitive participation became less disoriented and unsure in learning, with a better efficiency in concentration and attention in execution of tasks, reducing slowness in word attack or interruption in reading and writing.

A substantial improvement is recorded in terms of speed and accuracy, putting in right sequences verbal instructions, using a better syntax in communication. Our motor plans improve general executive functions, processes of self – regulation, cognitive processes in second language acquisition.

Introduction

In this article we briefly review a theoretical understanding of learning in terms of *fluidity* [1] moving from the importance of motor coordination and rhythm based to a recent emphasis on motor training program to learn better a second language. Most children have difficulty to activate time and execution in their tasks and they are extremely slow when they speak in a foreign language.

Interventions based on motor sequences combined with language show an important training effect to attention, fluency and the co-ordination of the brain itself [2]. It is important, since early years, to enhance children's performance in learning English, speaking and moving in a simultaneous realization of multiple functions (perceptual-motor and verbal motor) in a dynamic way. Children trained on fast motor sequences, coordination and rhythm; improve their executive functions, including working memory and inhibition. For this reason, learning a language is a dynamic function, a process of solidarity of motor coordination along physiological coherence that normally regulates the higher human functions. [3]

In this sense, speaking, reading and writing a language, in this section we are specifically taking into consideration English language, is a functional performance and not simply a skill. In terms of functional, in our study we refer to a dynamic interpretation expressed in the conception of multi-components which impact on the course of learning.

The second language oral proficiency development is discussed in terms of motor training programme that has recently gained additional interest in learning as increasing neuroscientific research demonstrates its positive effects on brain processing development, improving spontaneous conversational speech.

1.2 Effects of motor training in second language learning

When a child cannot maintain good motor coordination and control of her body, she is not well-equipped for learning [4]. In this sense studies of children undergoing motor training consistently show that they perform better in the areas of language, rhythm perception and fluency in general.

We can find the explanation as language and motor skills are linked and a constant training improves brain mechanisms and the ability of these mechanisms become more organized.

This happens in learning in general, but above all when children are learning a second language, it is important to reach the automaticity of that language and we can achieve



through movements. In this sense exercising in sensory motor synchronization before class and moving during class made language acquisition seem easier.

The benefit of motor training can be found in verbal abilities such as verbal fluency and memory in second language acquisition, but above in auditory processing.[5]

1.3 To be fluent in terms of *Fluidity*

What is it fluidity? The fluidity includes initiation (*incipit*), the constancy in execution, self-correction, and self-inhibition.

Fluidity allows better coordination, in particular when you speak, avoiding interruptions, stopping and lack of comprehension.

Fluidity is much more than speed as it is related to the alternating of rhythms and procedural learning.

In these terms, the speaking speed is translated as fluidity, referred not only to language but to all areas of child's personality. It takes care of the entirety of the person in all its functional areas (motor, perceptual, emotional, affective, thought, communication,) under an intense cognitive presence.

When you speak is not important to go fast but to be fluent, with a constant attention to the context. One of the most difficulties is to find the words, or to select the words in our minds and to adopt them to the conversation. When we are able to initiate action with the right speed and an agile self correction, we are fluid, well organize and ready to real learning. Many often our students are slow and messy in their motor processes and for this reason they are messy when they speak, read and write.

Language and movement (motor coordination) are strictly linked and better you move better you learn![6] So to be fluent in a foreign language means to speak with rhythm, intonation and expressions, in other words an integration of sensory information.

In particular, the increased fluidity together with the global approach allows a better coordination of spatial and verbal working memory, as well as transfer effects to attention. Children trained on working memory through execution of motor sequences improved significantly on trained tasks.

1.3 Let's get the rhythm!

English is a very rhythmical language, so that a learner who can maintain the rhythm of the language is more likely to sound both natural and fluent. This great influence on rhythm because English is a stress-timed language and students must learn it. Anyway the best way to learn a language is not simply speaking the language. The best starting to become fluent in English, in this case, is to improve the temporal dimensions of fluent action using body movements as exercise optimizes the brain and the whole person for learning. [7]

In other words messy executive processes inevitably disturbs language as it involves both time and fluency, then the automatic and fast processing of information, from which connections with reading and writing.[8]. The benefit of motor training improves attention, motivation, executive function skills and decrease anxiety when you are learning a second language. Under the automatic and intense cognitive presence, the training is based on fast motor sequences and aimed at soliciting a continued coordination. The active and fluid execution of motor automatic sequences, including exercises of language (words-sentences in English), allow a better organization in the sequential processing of the stimuli.

By doing motor sequences and execution of rhythms, slowness in the initiation (*incipit*) is reduced and conversational speech is more fluent. Helping them to do a series of developmental movements, they improve not simply a skill, but they develop stronger brain processing for language and learning.

If the rhythm produced is a major characteristic of spoken English, it will be important to know how to develop it when you speaking English. Many children at school tend to learn English isolating phonemes or graphemes, becoming too slow in their performance.

English language is an opaque language and English speaking children learn to memorize the most possible groups of sounds in different contexts, so that they dispose of enough information enabling them to face speech, reading and writing.



Our training programme is indicated for children but also for students and exercises are different, depends on age and what kind of difficulty they have in learning English.[9] In general the most difficulty is speed and fluency as our students tends to stop each time to find the right words or the right grammar rules instead of comprehend the context.

1.4 Improve Cognitive Participation

Execution of fast motor sequences (finger-clicking, clapping, tapping, jumping) in timing while you pronounce English words or sentences helps to build the rhythm and cognitive participation became less disoriented and unsure.[10]. For children, learning a second language requiring focused attention, memorization, and the progressive mastery of a technical skill.

Since early years, working on motor sequences means not to do separate exercises but a global approach using repetition till automaticity.

Reading, writing, speaking and listening are dynamic functions, motor and cognitive ones, self-regulated with feedback processes and anticipation.

We work on sequences, synchronization and speed associating language and movements.

Our program [11] is organized in three areas:

Motor Area

- Execution of sequences with the ball
- Execution of motor coordination
- Executions of praxis using her hands
- Execution of ballistic coordination
- Simultaneous realization of multiple functions both perceptual-motor and verbal-motor)
- Control of multiple functions

Language Area

- Following verbal instructions and putting in sequences
- Using syntax in a communication
- Perceptual Area:
 - execution of rhythms
 - Execution of visual and auditory procedures

Children improve in[12]:

- Balance and coordination[13] (jumping and clapping, skipping, etc.)
- Spatial organization
- Self-control
- Attention
- Self esteem
- Temporal patterning in speech production and perception[14]
- Speech rhythm
- Motor control and the coordination of skilled action
- Dynamic and Ecological approaches to mind.

Synchronization[15] is the key word of our program as the child does exercises based on motor sequences in a speed work but contemporary he speaks (Example: Clap your hands, walk and pronounce these English words sing – song/ king kong/ flip-flop/see-saw/tip-top) It is therefore likely that transfer skills of executive function, self-control and sustained focused attention translate into better results in language learning.

A substantial improvement is recorded in terms of speed with significant fluidity in the rhythms and the creation of more functions. Cognitive participation is better as the child is able to maintain concentration and attention in execution of tasks.

Reading and speaking are more fluid with reduction of moments of fixed gaze on every word.



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