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## "I feel my body moving and I hear the word": Using gesture-like movement to enhance productive word recall

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## "I feel my body moving and I hear the word": Using gesture-like movement to enhance productive word recall

### Abstract

Have you ever been in a situation where you just can't quite think of the word you want to say? You know the word. Perhaps you've used the word many times before. But for some reason, on this occasion you just can't recall and produce the precise word you want. It's in your mind, you know it's there, but it just won't come out. This is a linguistic event which has been quite widely researched and is known as the tip-of-the-tongue phenomenon. Add to the mix the fact that you are learning a second language (L2) and need to navigate complex lexical networks to locate not only the item conveying precise meaning, but the one in your less efficient L2 lexical network. Then, imagine someone looking at you, waiting; waiting for you to say it (intelligibly), hanging on your every syllable. Sound frustrating? Well, you are not alone. Many L2 learners have voiced this exact frustration, but what can be done in the ESL classroom (and beyond) to facilitate the use of words in speech?

### Keywords

hear, word, i, enhance, moving, gesture-like, movement, body, productive, "i, my, word":, feel, recall

### Disciplines

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# Think Tank: Vocabulary

Bianca Mister-Colmenares & Michael Burri



## **“I feel my body moving and I hear the word”: Using gesture-like movement to enhance productive word recall**

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Have you ever been in a situation where you just can't quite think of the word you want to say? You know the word. Perhaps you've used the word many times before. But for some reason, on this occasion you just can't recall and produce the precise word you want. It's in your mind, you know it's there, but it just won't come out. This is a linguistic event which has been quite widely researched and is known as the tip-of-the-tongue phenomenon. Add to the mix the fact that you are learning a second language (L2) and need to navigate complex lexical networks to locate not only the item conveying precise meaning, but the one in your less efficient L2 lexical network. Then, imagine someone looking at you, waiting; waiting for

you to say it (intelligibly), hanging on your every syllable. Sound frustrating? Well, you are not alone. Many L2 learners have voiced this exact frustration, but what can be done in the ESL classroom (and beyond) to facilitate the use of words in speech?

In order to systematically explore this problem, we must first distinguish receptive from productive recall. According to Nation (2001), receptive recall can be defined by two conditions, the first of which is matching a given word form to its respective meaning from a list of options. The second one is retrieving word meaning to match a given form. On the other hand, productive recall is encountering a word's meaning and recalling the corresponding form from memory; or, drawing both form and meaning from the mind to communicate a precise meaning. Nation states that the second of each pair of conditions is more difficult than the first, since the information that is to be retrieved demands more lexical knowledge be recalled effectively.



The foundation of effective productive recall is a strong form-meaning link. A strong link between lexical form and meaning has been likened to a well beaten path which is clear of obstacles and therefore assists in more efficient recall of phonological and semantic information (Schmitt, 2010). Repeated verbal output can assist in strengthening the association between form and meaning, and therefore may lead to improved productive recall and use (Nation, 2001). In fact, numerous studies have shown the effectiveness of immediate serial recall on word learning, known as the Hebb repetition effect (e.g. Norris, Page, & Hall, 2018). Considering a classroom environment, pictures can be a powerful tool to prompt such productive recall. If the link between a picture and word form has been created, the picture can then be used in various game-like activities to elicit repeated productive retrieval of phonological form. In this case, images are used as a tool to repeatedly provoke productive retrieval of word form. Not only are images powerful tools in enhancing productive recall of words, but gesture can also strengthen mental pathways to reinforce memorization of lexical items (Macedonia, 2014).

**“ Body movement has strong connections to linguistic information.”**

Neural pathways are so complex, in fact, that body movement has strong connections to linguistic information. Research has shown that oral language and physical movement are two neurologically connected domains, where verbal information is a

linguistic memory code, and physical movement is a complimentary non-linguistic code (Armstrong, Stokoe, & Wilcox, 1995). As the two memory codes apparently do not create competing brain signals when activated simultaneously, movement can enhance learning as there are more senses integrated into the learning process, leading to a richer neurological network (Armstrong, Stokoe, & Wilcox, 1995). It has been demonstrated that when learners simply read the words *kick* or *throw*, parts of the brain which control the legs and arms are activated; whereas reading or hearing the word *cinnamon* activates areas of the brain associated with taste (Macedonia & Knosche, 2011). Therefore, incorporating gesture in the language classroom can potentially be a powerful tool in enhancing both lexical perception and production (Lee & Lyster, 2015).



The Rhythmic Fight Club (RFC) is a Haptic Pronunciation Teaching (HapT-Eng) technique<sup>1</sup> that uses gesture-based movement, plus touch, to highlight prominence and stress in continuous speech. HapT-Eng is a systematic teaching method that incorporates a combination of movement and touch to enhance learning of English pronunciation features. The gesture-based component of RFC is the use of boxing-like movements that draw attention to stress patterns of English speech. The haptic element of RFC is the holding of a small, soft object (e.g., a tennis ball or a stress ball) that can be squeezed while punching out the stressed/prominent syllable to engage haptic senses. In the case of the first author's doctoral study, a large number of students participated in the research and therefore each learner made a scrunched up ball of paper that they held in their dominant (usually, right) hand while they punched. The RFC provides a powerful setting which we have repeatedly witnessed in our classrooms to reduce learner anxieties associated with speaking. The RFC technique has also been suggested as a tool which could be used to assist in vocabulary development (Burri, Baker, & Acton, 2016). In the aforementioned doctoral study, the first author of this article incorporated the RFC technique into a productive oral vocabulary workshop. The technique was used as a mechanism to assist learners in mastering production of word form, so that words could be more readily available for use in speech. Focus groups with student-participants provided strong evidence for it being an enjoyable technique that led to improvements in target lexical production. Moreover, teachers commented on the simplicity of

<sup>1</sup> For more information on the RFC technique click here for a demonstration:

<https://www.actonhaptic.com/videos#/demovideos>

For more information on haptic pronunciation teaching click here:

<https://www.hlomag.co.uk/june19/proposing-a-haptic-approach>



implementing the RFC and found it to lift the mood and engagement of students learning within intensive classroom environments.



But what about more arbitrary gestures and word learning? It has been suggested that arbitrary gestures may not be effective in enhancing linguistic production, especially if it is not the learner who makes the gesture with their own body (Bergmann & Macedonia, 2013); not to mention that such random gestures, made either by the instructor or the learner, are visually distracting, which may create an extra cognitive burden and be difficult for the learner to process, therefore impeding learning. However, if the learner enacts the gesture, as opposed to solely observing it, linguistic gains can be made (Bergmann & Macedonia, 2013). Using gesture to teach concrete verbs can be easily imagined, for example having learners imitate throwing a ball when learning the word throw, but what role does gesture play in teaching more abstract meanings? The fact that arbitrary gestures have been shown to be particularly ineffective in the learning of adjectives and abstract nouns (Macedonia & Knosche, 2011) also needs to be considered. However, the gesture-like movements used in the RFC are not arbitrary in that they carry a meaningful conceptual representation of target pronunciation, particularly the foregrounding of strong (stressed) syllables and the compression of weak (unstressed) syllables.

Let us return to the doctoral study. Joao is an intermediate level L2 learner participant from Brazil. He is in his mid 20s and his first language is Portuguese. Although Joao studied English in primary and high school, he claims to have had very little practice speaking English since. At the time of the doctoral research he had been in Australia for three months and was undertaking an intensive course of study to improve his English language skills. Upon meeting him, it became clear that he was a very animated speaker and used his hands constantly to add emphasis and express himself. He was a self-confessed fitness enthusiast, was currently learning to surf, and had trained as a boxer in his native Brazil for many years.

Joao's history as a boxer seems to have contributed to the way in which he interacted with the Rhythmic Fight Club activity. During RFC practice Joao was observed to be incorporating his entire body into the task. As part of the RFC technique learners imitate speech stress patterns with their body; where unstressed syllables are accompanied by small jab-like movements keeping the dominant arm (or punching arm) bent and close to the body; whilst stressed syllables are accompanied by a long punch that stretches the punching arm out in front of the body. Joao was noticeably

paying attention to small physical details such as getting down low by bending his knees; pointing the toes on his right leg and twisting his hips when punching out prominent syllables; as well as ducking and weaving his shoulders as he switched from unstressed to stressed syllables. All of these movements seemed to come naturally to Joao and his attention appeared to remain focused on his body throughout the activity.



In comparison with other students, Joao was on another physical plane. Although all students undertook the same half-hour session of Rhythmic Fight Club training in the initial stages of the doctoral study, Joao was engaging his whole body while other students were barely moving. To contrast Joao with his peers, he was reaching out and making full use of the space in front of his body when punching. He also kept his non-punching arm bent and up close to his face, as though he was defending. Many of his peers, on the other hand, were simply standing up straight and punching their right arm forward slightly to indicate the difference between stressed and unstressed syllables, while the other arm remained pinned to their side. As the classes continued, most students reduced movements to modestly nudging their right shoulder forward on stressed syllables but

not punching at all, something which was not demonstrated by the instructor. In contrast, Joao maintained strong physical form right through to the end of the half-hour session. He seemed to be treating it as a full-body training session.

Joao was the only student who was observed to be prompted to recall word form by means of a punching gesture. In classes following Rhythmic Fight Club practice, learners engaged in speaking tasks which required word form to be recalled from memory to convey precise meaning in communicative tasks. During the workshop, the target word *fascinating* was taught with the collocation *absolutely*, as in “the museum was absolutely fascinating”; and, in a productive speaking task Joao was attempting to produce an utterance using this target phrase. However, after saying “my holiday was absolutely...” Joao paused and seemed to be having a tip-of-the-tongue moment as he searched his mental lexicon for the word form. At this point, the teacher<sup>2</sup> stood in front of Joao and punched the rhythm of the target phrase. As the teacher punched, he repeated “my holiday was absolutely...” then continued to punch the rhythmic pattern of the missing word *fascinating*. While doing this, the

<sup>2</sup> Note that neither of the authors of this paper was the teacher in this research. The teacher referred to here was a voluntary participant in the doctoral study, for which the first author was the researcher/observer.



teacher replaced the target word's syllables with little grunts and on the stressed syllable, and then produced an elongated grunt and punched to indicate prominence on that syllable. Joao's eyes immediately lit up and without hesitation he produced the target form *fascinating* and continued telling his story. Although the RFC activity appeared to assist all learners in enhanced accuracy of word stress, there was no obvious indication of enhanced productive recall amongst others to the degree that there was with Joao.



So, it seems that Joao's case provides support for the more direct connection between physical movement and word recall. Something which was unique to Joao in this study was his history as a boxer. Though the evidence is anecdotal, Rhythmic Fight Club may have assisted Joao in enhancing productive recall of target vocabulary as his muscle memory was stronger than that of others due to his full-body engagement in RFC practice. Interestingly, when asked about his experience with the RFC technique and how he felt it helped him develop productive vocabulary of target words Joao said: "I feel my body moving and I hear the word. [I] didn't realize this is just a natural process; it just happen."

Joao's instance of gesture-enhanced vocabulary recall provides further evidence of the benefit of using body movement in abstract word learning. Although Joao's case reported in this article has been selectively drawn from a larger study, we believe it



holds value and reflects an opportunity for further discussion and investigation into the practical benefits of systematic gesture-enhanced vocabulary instruction.

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