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Comprehensible Output and the Effects of Music and Movement in Spanish Language Acquisition

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Abstract

Music and movement have the potential to trigger memories and connections that affect mood and behavior. According to research in Second Language Acquisition (Del Campo 1997), meaningful communication is composed of three important elements: gestures, verbal language and intonation. Gestures and movement account for nearly 70% of communication, whereas the remaining 30% of meaningful communication lies in intonation and verbal language. Earworms, or Involuntary Musical Imagery (INMI), have played an important role in marketing by using music that gets “stuck” in the brain. Factors such as note duration, pitch intervals and exposure to an environment or movement associated with the onset of INMI may explain the brain’s ability to easily recall and reproduce songs or dances. The use of INMI can be useful when coupled with teaching methods such as Total Physical Response (TPR), which require full body interaction in language education and are effective in memory recall by using gesturing, our most dominant form of communication. Though music and movement have been independently proven effective in Second Language Acquisition, studies have not yet combined and analyzed the effectiveness of both of these forms of communication. Incorporating gestures and music may help second language learners grasp complicated lexical concepts such as prepositions, which can be difficult to understand because they describe both abstract and concrete relationships between animate and inanimate objects. The spatial prepositions used in this study that describe physical location, however, may be easier for language learners to visualize. It is hypothesized, for example, that using TPR to introduce prepositions might enhance cognition. In this study, students in an experimental group will mirror a teacher-led dance that includes instrumental music, vocabulary of prepositions and chanting to chase an imaginary mouse. Students will then be assessed for comprehension immediately following the lesson as well as one week later to determine the effects on memory recall. A control group will receive a lecture-based lesson with the same assessment administered at the same intervals as the experimental group. The data will be analyzed to determine the effects of the combined TPR and INMI methods on the language learner’s ability to understand, retain and reproduce the new vocabulary. Students will also receive an opinion survey following the study that will assess their experience and the effectiveness of the methods used.

Keywords

English as a Second Language, ESL, language acquisition, earworms

Disciplines

Bilingual, Multilingual, and Multicultural Education | Educational Methods

The Effects of Music and Movement in Second Language Acquisition

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Faculty Mentor: Dr. Kelly Arispe

Music and Vocabulary Learning

- Uncommon words: Using background music resulted in 11.6% increase in understanding & retention
- Common words: Using background music resulted in 5.8% increase in understanding and retention

(De Groot, 2006)

Music, Pictures and Vocabulary Learning

- When combined, music and illustrations greatly improved understanding and retention
- Additional explanation and assessments less than a week following the lesson showed a 39% increase in understanding and retention

(Medina, 1990)

Movement, Gestures and Communication

- Meaningful communication depends on gestures and movement: 70% (Del Campo, 2009).
- We rely on gestures and nonverbal communication to communicate (Corballis, 2009).

Earworms

- Catchy songs get stuck in our brains when:
 - we are in low attention states
 - they trigger a memory
 - we are exposed to music(Willamson and Müllensiefen, 2012)
- Earworms contain small pitch intervals and long note duration
- People who play instruments are more likely to become “infected” with earworms (Francois and Schon, 2011)

Research Questions

- Does music with movement benefit Second Language Acquisition?
- Can earworms be a positive factor in continuous learning?
- Does the treatment facilitate vocabulary receptive and productive knowledge?

The Study

Treatment: music & movement lesson (15minutes)

1. Classical music with earworm components
2. Chanting the vocabulary to the beat
3. Tables are point of reference
4. Moving to the space that represents the preposition
5. Repeated 4x

Orchestra Song

by Robert Schumann



Assessments

Baseline: Determines whether they've seen, know or can use prepositions

Immediate post-test: recognition task







Delayed post-test: production task & survey

Delayed Post-Test

E

Identifying# 1

Instructions: You are sitting in the chair. 1) Place an X on an area of the table or close to the table 2) Write the name of the preposition that illustrates the X (*la equis*) in relationship to the table (*la mesa*). 3) Write a sentence in Spanish, using the words you learned in our recent lesson, to describe the X (*la equis*) and the table (*la mesa*).

1 Preposition: _____	2 Preposition: _____	3 Preposition: _____
 Sentence: _____ _____	 Sentence: _____ _____	 Sentence: _____ _____
4 Preposition: _____	5 Preposition: _____	6 Preposition: _____
 Sentence: _____ _____	 Sentence: _____ _____	 Sentence: _____ _____

Progress

- Initial coding has begun; analysis still to be determined
- Larger sample size was needed; additional experimental group was added ($N = 70$)

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