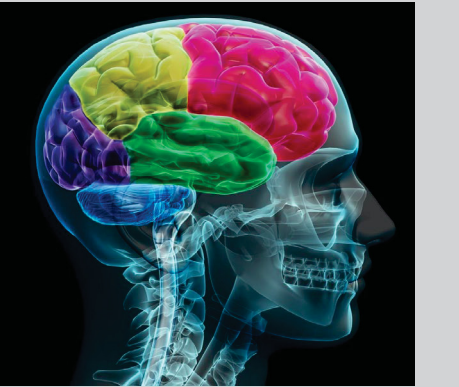
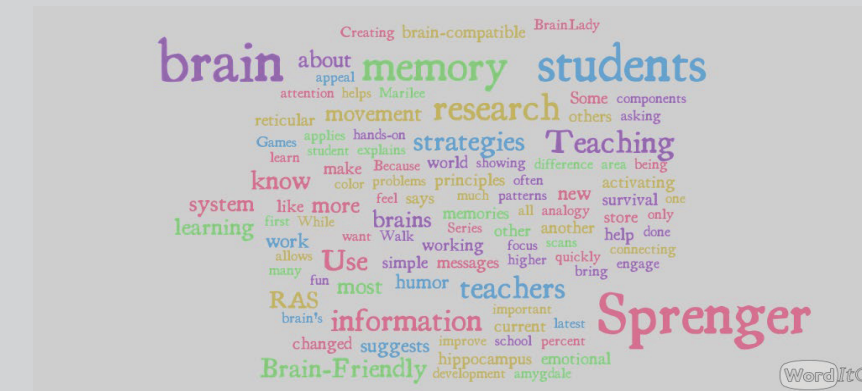
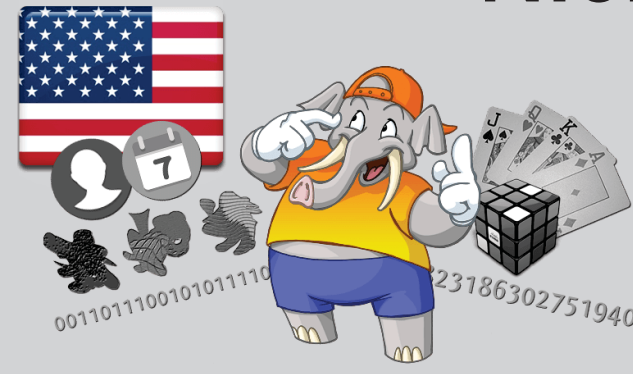
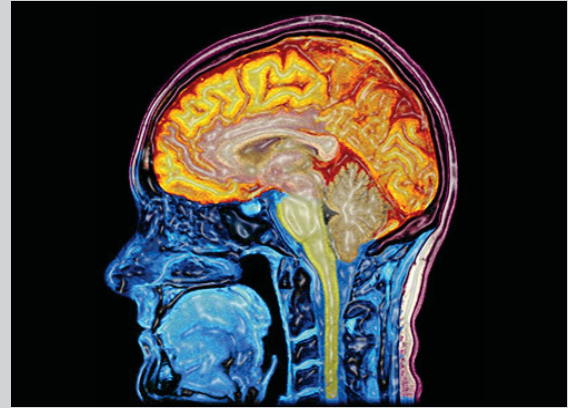


# Transference of Memory Strategies to Academic Learning and Memory Sports

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## Abstract

Memory is the process of recalling what has been learned and retained especially through associative mechanisms. Anatomically, this includes electrical impulses fired in our brains to relay information. When we learn new information, we use our memories to help recall the information stored in our brains. Without memory, there is no access to using stored information. Mnemonics are techniques used to improve and enhance memory. Other memory techniques include but are not limited to, the method of loci, peg systems, and phonetic systems. From these systems spawned competitions, memory sports, which have created remarkable feats of memorization. Hence, motivating individuals to understand and learn memory techniques. The purpose of this study is to assess and compare how using memory strategies can be applied to memory sports games and academic learning. The study will test a novice memory athlete who is also an undergraduate communication sciences and disorders student.

## Background Information

Students of all ages can use memory techniques (MTs) to assist in learning academic content. Knowledge about brain sciences and working memory are necessary to effectively impact academic learning (Watson, Wirtz, & Sumpter, 2015). Mnemonics, created by the Greek's over a thousand years ago, aid in memorizing in order to learn information according to Yates (Putnam, 2015). Today, mnemonics used in schools include acronyms, songs, and writing and indicate a small percentage of what and how MTs are used when learning new information. Mnemonic techniques along with other MTs have served as the foundation for memory sports, a competition that involves specific memory challenge tasks ([www.memory-sports.com](http://www.memory-sports.com)). Memory athletes compete in memory sports using many learned MTs (e.g., method of loci) in isolated games such as memorizing a deck of cards or memorizing random, fictitious vocabulary words and their meanings. Many believe that MTs can and should be used in educational settings, as superior retrieval tools for all students to use; however it is uncertain whether MTs assist in application of concepts.

## Research Question

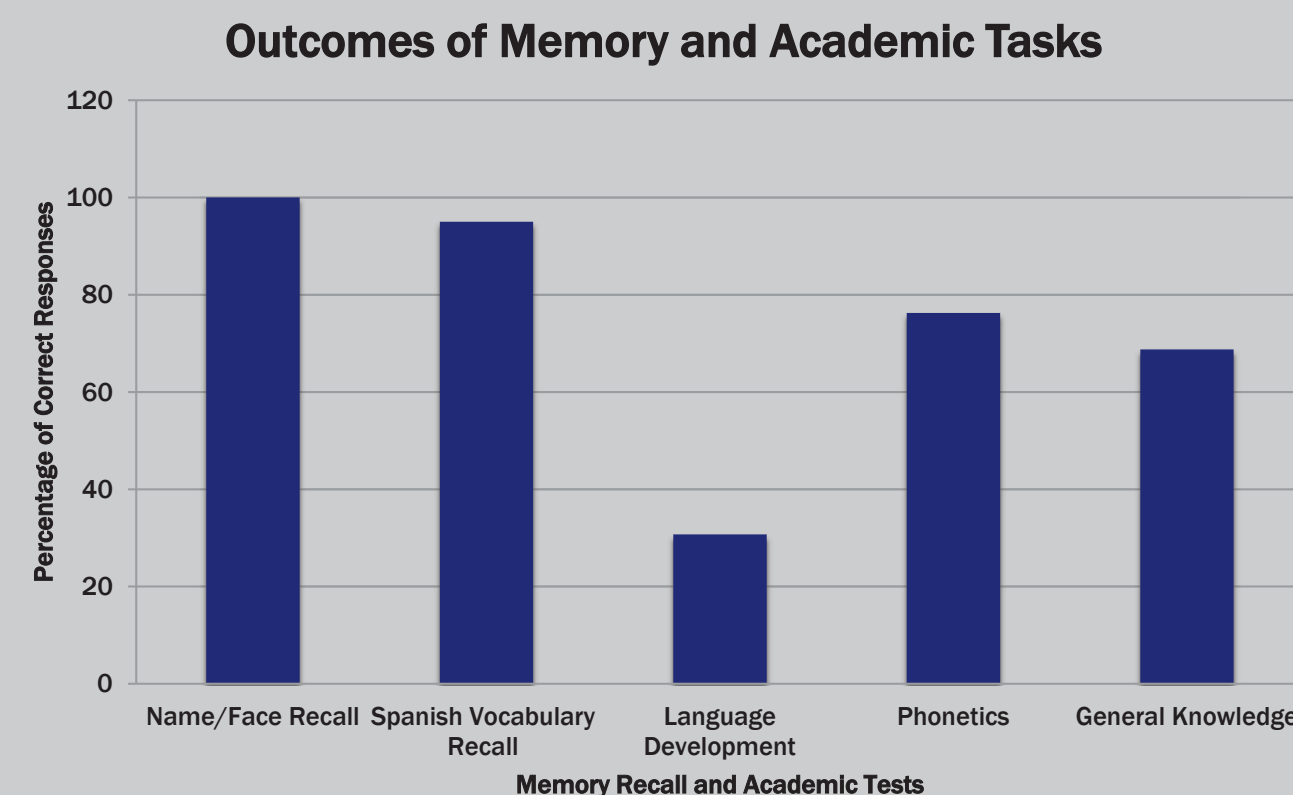
How effective are the use of memory techniques when comparing outcomes of academic learning to memory games?

## Methodology

The participant is a college student who began to learn MTs in September 2015. The participant initially learned the MTs to learn Spanish vocabulary and then subsequently used the MTs to help learn course content. The participant was given 2 tasks, one academic learning assessment and 2 memory sports games. The academic learning assessment was created by a professor in the participant's major department and included 12 questions from content learned in courses taken Fall 2015. The questions were developed based on Bloom's taxonomy and were related to language development, phonetics, and general knowledge of CSD. Each section contained 4 questions that belong to either the Remembering, Understanding, Applying or Analyzing categories from Bloom's taxonomy. After each question, the participant had to respond to 2 questions that queried his use of memory techniques when responding to the questions. The participant was given 60 minutes to complete the assessment. The memory game included 2 activities. One included memorizing faces and names (first and last). The other included memorizing novel Spanish vocabulary (including meanings). Data was analyzed using descriptive statistics and visual inspection of graphs.

## Results

The results of the study revealed that the memory techniques used by the participant were more effective for memory sport games rather than academic tasks that required memory recall. Also, there did not seem to be an interaction between the type of question (e.g., analyzing, remembering) and the participant's ability to respond correctly to the question.

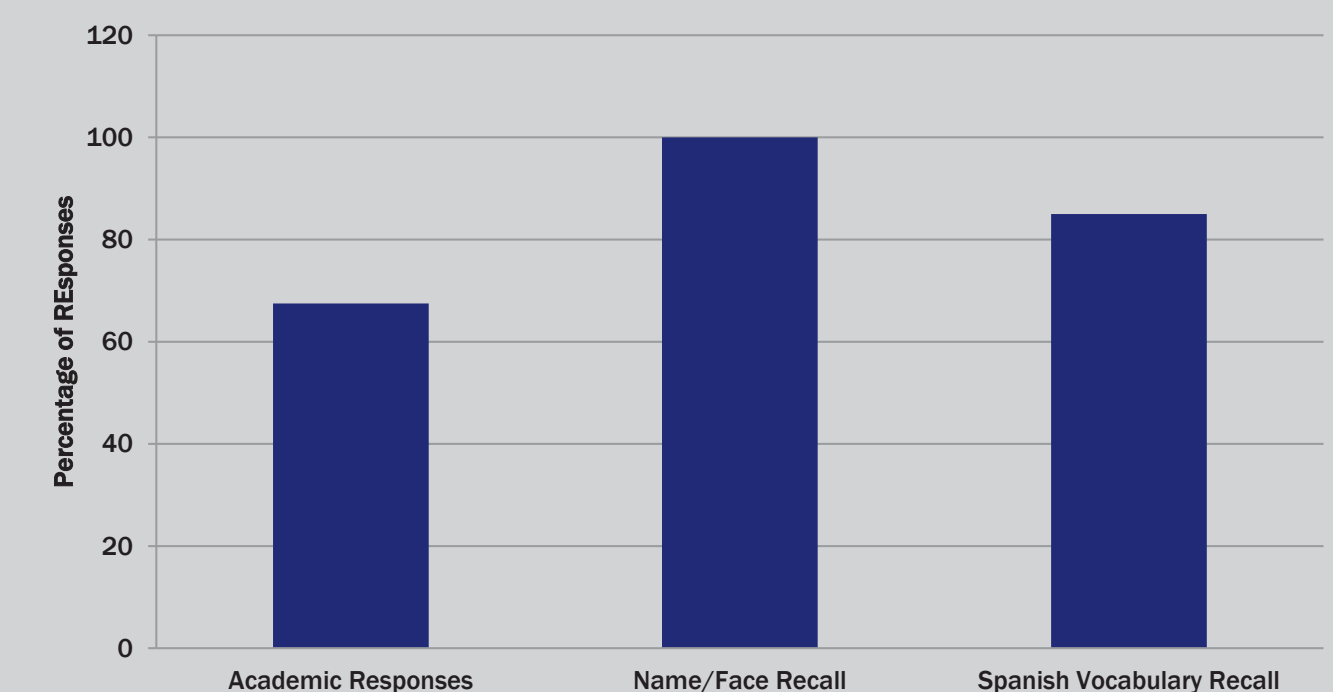


The participant relied more on MTs to respond to the memory game tasks than academic learning tasks. The percentage of responses attributable to

## Results (continued)

memory techniques were higher for the memory games than the academic assessment.

Percentage of Responses Attributable to Memory Techniques



## Conclusion and Implications

- MTs are more effective for participating in memory games than academic learning.
- Memory recall techniques are more suited for specific tasks. This may explain why performance scores on memory games were higher; memory games represent specific and isolated skills.
- Memorization may serve as a useful tool in the academic setting; however, students must be able to conceptualize, apply, and analyze facts that are recalled.
- Additionally, a review process has to take place in order to retain information in long term memory.
- More than 50% of the participant's responses were attributable to MTs; therefore, MTs can be used in the academic setting but not as an EXCLUSIVE tool for learning.

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