Lehrstuhl für Bewegungswissenschaft
Fakultät für Sport- und Gesundheitswissenschaft
Technische Universität München

Bachelor Thesis

Unveiling the Synergy or Interference Between Motor and Declarative Tasks in Successive Acquisition

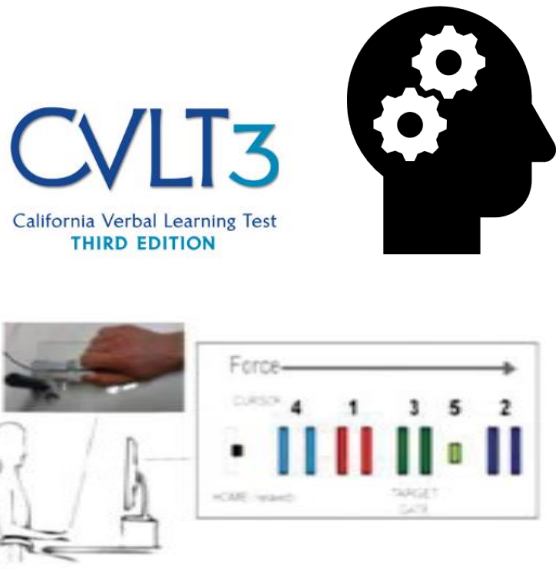
Description

Motor and declarative tasks are two distinct cognitive activities involving different brain areas and relying on differing cognitive processes. Motor tasks refer to actions that involve physical movements and coordination, such as riding a bicycle, typing on a keyboard, or playing a musical instrument. On the other hand, declarative tasks involve acquiring and recalling factual information and events, such as remembering historical dates, solving mathematical problems, or understanding concepts.

Interference between motor and declarative tasks can occur when both types compete for limited cognitive resources. For example, suppose you are trying to learn a new dance routine (motor task) while simultaneously studying for an important exam (declarative task). In that case, your cognitive resources may become overloaded, leading to decreased performance or difficulty in both tasks.

However, in some cases, motor tasks and declarative tasks can complement each other. Engaging in physical activities, such as exercise or playing a musical instrument, has been shown to enhance cognitive functions, including memory and learning abilities.

Overall, it is crucial to understand when and how motor and declarative tasks can interfere.



Methods

Sequential visual isometric pinch force task (SVIPT, Reis et al.,2009) as a motor task.

California Verbal Learning Test (CVTL,) or paired associate learning (PAL) as a declarative task.

Potential research questions

Do a motor (SVIPT) and a declarative task (CVLT or PAL) interfere with the encoding or consolidation of each other when performed successively?

Literature

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Contact

Veit Kraft (veit.kraft@tum.de),
Prof. Joachim Hermsdörfer