

Kolloquium „*Berner Gespräche zur Sportwissenschaft*“

Montag, 8.5.2017, von 16.15 Uhr bis 17.45 Uhr

Hörsaal C001 (Universität Bern, ZSSW Gebäude C, Bremgartenstr. 145, 3012 Bern)

Variability of practice as an interface between motor and cognitive development

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In this speech, I will highlight intriguing commonalities between the research areas of exercise and cognition and motor skill development and learning. While these two research domains have developed on separate tracks, the focus on variability of practice is central to both. I will adopt a joint sport science and neuroscience approach to identify the characteristics of designed motor learning experiences that can impact brain plasticity and cognitive development. Novelty, diversity, effort, and successfulness seem essential ingredients to render learning experiences meaningful to this aim. All these characteristics belong to the construct of variability as it is conceived in the informational and ecological approaches to motor skill learning. To transition theory into practice, I will discuss how variability of practice can impact cognitive and particularly executive function development. Finally, I will conclude by reframing variability of practice into emerging models of embodied cognition, highlighting the potential of the proposed intersection of chronic exercise and cognition, cognitive development, and motor learning evidence to unwrap a new venue for sport sciences and quality physical education.