

On Creative Minds and Brains: Insights, Implications and Challenges for Education

Creativity is recognized as a vital competence for students by the OECD and has been identified as a critical skill for future employment by the World Economic Forum. Despite its importance, creativity has traditionally been considered an elusive construct, difficult to define and study, and surrounded by various myths. However, recent research has made significant strides in understanding the neurocognitive basis of creative thinking and its broader role in creative behavior.

In this keynote presentation, I will begin by providing an overview of recent findings on the neurocognitive underpinnings of creative thinking. We will examine evidence for the involvement of semantic and episodic memory in creative cognition, as well as the roles of attention, cognitive control, and metacognition, alongside their underlying brain mechanisms. Following this, we will delve into the individual differences in creativity, and I will present a model that describes the multiple factors contributing to the transformation of creative potential into creative achievement.

The second part of the presentation will focus on the implications of creativity research for educational practice. We will revisit popular misconceptions about the nature and development of creativity. We will review insights on how educational environments influence creativity and how creativity, in turn, affects academic achievement. Furthermore, I will discuss interventions designed to foster creativity among students. The presentation will conclude by identifying key challenges and promising future directions for enhancing creativity within educational contexts.



Assoc. Prof. Dr. Mathias Benedek
University of Graz
Austria