

SYMPAB - (16550) - VISUAL STRATEGIES DURING GENERATION OF REPRESENTATIONS AND SUBSEQUENT EXPERIMENTATION IN PHYSICS

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Short Abstract

Multiple external representations are essential for STEM-learning. Previous work could also show that particularly the generation of visual representation can be beneficial for learning. In this contribution, we show how mobile eye tracking reveals underlying visual strategies during the generation process of visual representations and during experimentation. For the latter scenario, used a machine-learning-based object-detection algorithm for an efficient analysis of mobile eye-tracking data. The results indicate the added value of generating representations compared to given representations during learning which even has an influence on the subsequent experimental task.