UC Merced
Proceedings of the Annual Meeting of the Cognitive Science Society

Title
Adaptive Learning Technology based on Working Memory Capacity

Permalink
https://escholarship.org/uc/item/68953429

Journal
Proceedings of the Annual Meeting of the Cognitive Science Society, 44(44)

Authors
Cojean, Salomé
Martin, Nicolas

Publication Date
2022

Peer reviewed

eScholarship.org Powered by the California Digital Library
University of California

Adaptive Learning Technology based on Working Memory Capacity

Salomé Cojean
Univ. Grenoble Alpes, Saint Martin d'Hères, France

Nicolas Martin
LIG, Saint-Martin-d'Hères, France

Abstract

Learning processes are impacted by individuals' capabilities (e.g., working memory capacity). Nowadays, the technological improvements like those promised by deep learning methods open new opportunities to adapt learning environments. However, studies using the abilities of these models to individualize learning remain currently rare. The current research project aims to tackle one of the major constraints imposed by video learning related to the transitory aspect of delivered information. The purpose is to individualize the learning, based on learners working memory capacity (WMC). To this end, several elements need to be taken into account: (1) How to automatically and efficiently evaluate WMC without impacting learning; (2) Analyze in details the actual effect of WMC on video learning; (3) Get the most efficient and acceptable solutions to reduce the effects of WMC.

In J. Culbertson, A. Perfors, H. Rabagliati & V. Ramenzoni (Eds.), *Proceedings of the 44th Annual Conference of the Cognitive Science Society*. ©2022 The Author(s). This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY).