

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

A Grounded Framework of Cognition for Teaching, Learning, and Assessment in Higher Education

Permalink

<https://escholarship.org/uc/item/2x67h1jk>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 42(0)

Author

Halbherr, Tobias

Publication Date

2020

Peer reviewed

A Grounded Framework of Cognition for Teaching, Learning, and Assessment in Higher Education

Tobias Halbherr

ETH Zurich, Zurich, Switzerland

Abstract

Models of cognition and learning structure and inform the thinking and action of educational practitioners and researchers alike. They serve as a communication device both within and between research and practice. There is a need for a holistic framework of cognition that appropriately reflects and synthesizes the current state of the field of the cognitive and learning sciences with its rich diversity of research agendas. I propose such a model, which conceptualizes learning as unfolding from three interlinked basic domains: Conscious thought in the form of percepts and symbolic representations in a symbolic-conceptual domain; foundational preconscious processing in a domain of cognitive metaphor; as well as situated, embodied interaction in a tangible enculturated agent-environment domain. The fundamental theoretical commitment of this Holistic Framework of Cognition and Learning is to dynamical systems theory. Emergence serves as the functional binder that ties the frameworks seemingly disparate elements together into a coherent whole.