SYMPAB - (16401) - KNOWLEDGE-IN-USE IN SCIENCE AND IMPLICATIONS FOR THE DESIGN OF LEARNING ENVIORNMENTS

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Short Abstract

A knowledge-in-use perspective, when applied to science, creates a model for science learning built on the coordinated and intertwined use of disciplinary knowledge via disciplinary practices to achieve goals around understanding phenomena or solving problems that individuals and communities face. Such a model posits that students use multiple "dimensions" of science to authentically make sense of phenomena and solve problems, and defines these dimensions. This model of science learning has profound implications for the design of learning environments, especially in terms of how to design instruction and assessment to support multi-dimensional science learning, and how to scaffold students' developing expertise to enable them to engage in complex performances while they are developing their constituent knowledge, skills, and abilities.