

Sustaining and Bridging Sense-making and Collaborative Learning Across Multiple Interaction Spaces

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Abstract

With "social" technology tools becoming more and more pervasive, the diversity of technology-enhanced interaction spaces used by online participants afford researchers the opportunity to go beyond studies of "solo" action and investigate the rich, distributed system of thinking and learning that situates artifacts, action, and knowing in multi-user activity systems. Online, purposeful users may constantly flow from information gathering through static web resources, to collective interactions in synchronous chats, posting messages in bulleting boards, updating their shared blogs, and using other mechanisms of participation. Supporting knowledge building within these distributed activities —e.g. "bridging" past, present and envisioned interactions, as well as quasi-synchronous and asynchronous engagements across multiple small-groups and in larger electronic collectivities— represents a significant challenge for the design of effective online environments. This paper focuses on a preliminary investigation of the dynamics of sustained, technology-enhanced mathematical problem-solving and learning in small online groups of secondary students. In addition, I explore the related issues in the design of computer supports for bridging multiple interactional spaces for distributed knowledge building. This inquiry is contextualized within the Virtual Math Teams (VMT) project at the Math Forum online community (mathforum.org).