

## Orchestrating of complex inquiry: Three roles for learning analytics in a smart classroom infrastructure

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**Abstract:** This talk will present research of a pedagogical model known as Knowledge Community and Inquiry (KCI), focusing on the design of complex collaboration scripts that engage students in small groups and whole class collaborations, and the role of technology environments and real time learning analytics in helping the instructor to orchestrate such designs. I begin by introducing the KCI model, including some basic design principles, and describe its dependency on real time learning analytics and the role for a scaffolding technology environment. Next, I describe a technology framework known as SAIL (Scalable Architecture for Interactive Learning), which underlies the design of scaffolding environments and analytic support of sequenced interactions amongst people, materials, tools and environments. I outline the critical role of the teacher or instructor in our designs, and describe how this role is supported by the technology environment, in terms of orchestration. Finally I outline three implementations of KCI and the role of learning analytics, in supporting (1) dynamic, collective visualizations, (2) real time orchestrational logic, and (3) ambient displays. I discuss the role of ambient and active visualizations in supporting spontaneous and planned discourse, led by the teacher, and the implications for the design of discourse support environments.

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