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## **Using Chat-Analysis to Understand Engaged Learning in the Virtual Math Teams online community**

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The Virtual Math Teams (VMT) project studies the forms of collaboration and reasoning that take place in the context of online small-group learning of mathematics, and attempts to identify the characteristics of effective online collaboration conducive to deep mathematical reasoning. Central to the VMT research program are the investigation of the nature and dynamics of group cognition (e.g. Stahl, 2006) as well as the design of effective technological supports for quasi-synchronous small-group interactions, and its linkages with distributed, asynchronous interactions at the level of the online community.

To achieve these goals, the VMT research group uses approaches inspired by Conversation Analysis to explore the processes of sense-making peculiar to textual exchanges mediated by chat technologies. Such chat analysis allows researchers to inquire about the qualitative aspects of moment-by-moment learning interactions as well as assess the interactional opportunities for and barriers to collaborative learning created by chat environments with various functionality. The use of this qualitative approach, grounded in records of interactions and centered on the co-participant’s perspective, matches very closely our intent to uncover the characteristics and systematics of group cognition and its relationship with small-group interactions.

We are particularly interested in the methods that participants develop to conduct their learning interactions online. Taken together, these methods define a culture, a shared set of ways to make sense together. The methods are subtly responsive to the chat medium, the pedagogical setting, the social atmosphere and the intellectual resources that are available to the participants. These methods help define the nature of the collaborative experience for the small groups that develop and adopt them. With the use of data collected through the project the presenters will illustrate the method.