Group Cognition in Problem Solving Dialogues: Analyzing differences between voice and computer transcripts

Melissa Butts  
*Valparaiso University*

Daniel Leighty  
*Valparaiso University*

Christine Warner  
*Valparaiso University*

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How Poison is played:
• There are twenty tiles
• Two teams take turns removing 1 or 2 tiles
• The team to take the last tile loses
Problem Solving- finding the winning strategy

Transcripts were annotated three ways:
• Bits of Realization: a set of observations specific to solving the Poison problem developed at VU.
• Conversation: a set of dialogue actions, developed by the VMT project observing students solving math problems.
• Problem Solving: a set of problem solving actions, also from VMT.

The percentages suggest that working in person with a group produces a different conversation and problem-solving flow than working through a computer chat program.

Bits of Realization
- Bits of realization richer with Bit 13 making an observation
- Online conversations richer with Bits 19 filler and 11 playing the game

Conversation
- Voice conversations richer with Bit 13 making an observation
- Online conversations richer with Bits 19 filler and 11 playing the game

Problem Solving
- Voice conversations richer with offer and elaborate dialogue moves
- Online conversations richer with perform, check, and reflect

The null hypothesis that voice and computer-mediated behavior are the same is rejected. All p < 0.001.

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