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## 'Systems' and Its Impact on Virtual Teams and Electronic Learning

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Abstract: It is vital that students are supported in having balanced conversations about topics that might be controversial. This process is crucial to the development of critical thinking skills. This can be difficult to attain in e-learning environments, with some research finding students report a perceived loss in the quality of knowledge exchange and performance. This research investigated if Systems Theory could be applied to structure the discussion, improve information sharing, and reduce conflicts when students are working in online environments. This research involved 160 participants across four categories of student groups at a college in the Northeastern US. Each group was provided with a shared problem, and each group was expected to make a proposal for a solution. Two groups worked face-to-face; the first face to face group engaged with the problem and each other with no intervention from a facilitator; a second face to face group worked on the problem using Systems tools to facilitate problem structuring, and decision-making. There were two types of virtual teams. The first virtual group also used Systems tools to facilitate problem structuring and group discussion. However, all interactions were conducted in a synchronous virtual environment. The second type of virtual team also met in real time but worked with no intervention. Findings from the study demonstrated that the teams (both virtual and face-to-face) using Systems tools shared more information with each other than the other teams; additionally, these teams reported an increased level of disagreement amongst their members, but also expressed more confidence and satisfaction with the experience and resulting decision compared to the other groups.

**Keywords:** e-learning, virtual teams, systems approach, conflicts

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