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Enhancing the Performance of Geographically Dispersed Aerospace Teams in the Global Aerospace Industry

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Overview

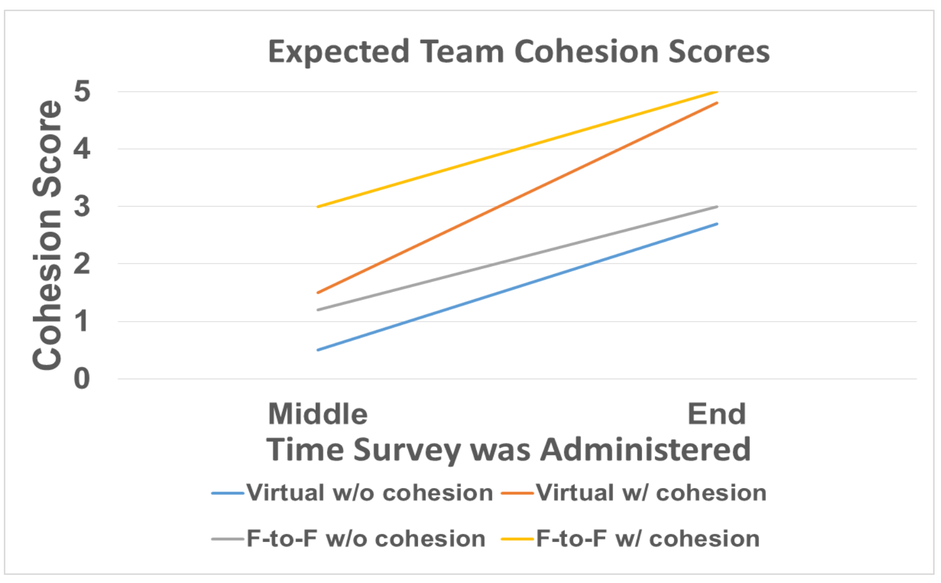
Aerospace science is a highly computerized industry that often utilizes geographically dispersed teams, which require extensive task coordination and information sharing through technology to complete their tasks or missions. The objective of this study is to investigate how interactions between team members prior to a virtual (i.e., computer-mediated) task impact the overall performance, confidence, and cohesiveness of virtual teams.

- Cohesion Task (Present or Absent)
- Communication during Task (Face-to-face or virtual)

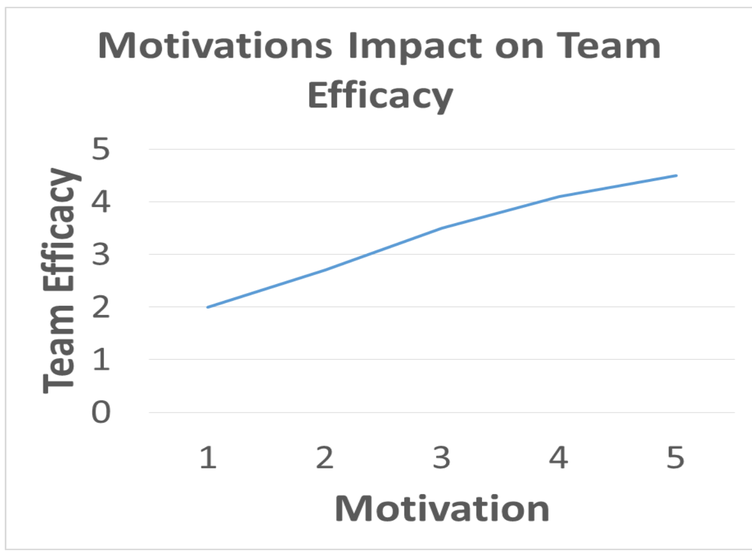
Procedure
Motivation and Efficacy Survey
Team Cohesion Task
Cohesion, Motivation, and Team-Efficacy Survey
Virtual Team Task
Cohesion, Motivation, and Team-Efficacy Survey

Team efficacy is defined as a team's belief about their ability to accomplish a task.

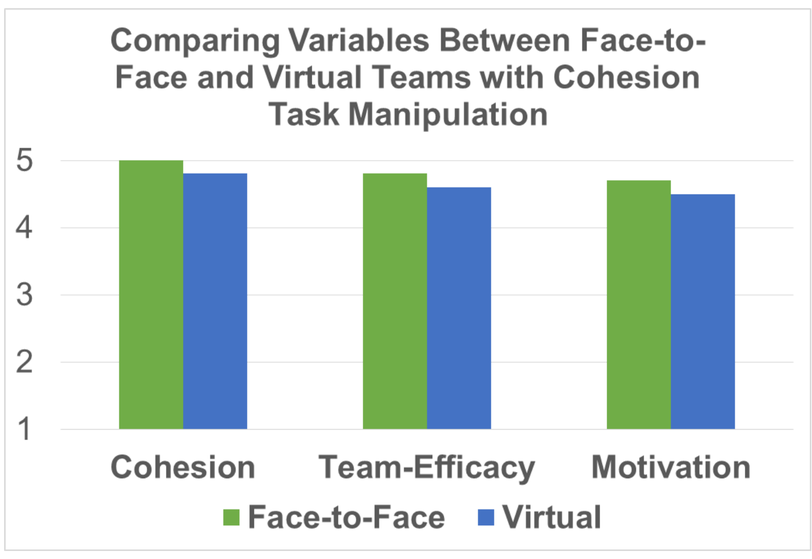
Key Expected Findings



- Face-to-face and virtual teams report no statistically significant difference in scores for team cohesion by the end of the experiment.
- Teams receiving a cohesion task prior to the team task report higher levels of cohesion, and reach higher levels of cohesion quicker.



- As team level motivation increases, perceived team efficacy also increases.



- There in no difference in cohesion, team-efficacy, and motivation scores between face-to-face and virtual teams **who receive the cohesion condition**.

Explanation

- Pre-task cohesion-building activities promote the development of team cohesion, and perceived team-efficacy.
- These increases in cohesion and team-efficacy positively correlate with team performance.

Impact

By improving the quality of communication between geographically dispersed team members, aerospace teams may experience improved productivity and decreased timescales for completing projects.

By implementing these kinds of cohesive interactions in virtual teams, this experiment can increase team cohesiveness as well as enhance communication between team members operating in a virtual environment.

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