

Studying Multi-Team Membership and AI Use: An Experimental Platform

TREO Talk Paper

Kelly J. Fadel

Utah State University
kelly.fadel@usu.edu

Elisa Mattarelli

San Jose State University
elisa.mattarelli@sjsu.edu

Lydia Wright

Utah State University
lydia.wright@usu.edu

Bhavna Hariharan

San Jose State University
bhavna.hariharan@sjsu.edu

Abstract

In contemporary knowledge-intensive work settings, employees are frequently assigned to multiple teams simultaneously. While such multi-team membership (MTM) can generate benefits for organizations, teams, and individuals, empirical evidence highlights substantial challenges, including attention fragmentation, role conflict, coordination difficulties, and conflicting norms. Given both the prevalence of MTM and these challenges, further research is needed to understand how individuals and teams can function effectively in such environments.

This paper introduces a new online platform designed to experimentally examine work in MTM contexts. The platform enables participants to engage in team-based activities while holding concurrent memberships in multiple teams, communicating through a chat interface that simulates distributed virtual work. In its current configuration, each participant is assigned to two teams working in parallel on interdependent but distinct tasks. For our own research study, we developed two logical puzzle tasks: a museum theft mystery and an expedition planning exercise. Participants assume distinct roles across two three-person teams (one per task), with no overlap among other team members. Each individual is responsible for solving one component of a team puzzle, with critical constraints distributed across members, requiring coordination and information sharing. Performance is assessed at both the individual level (accuracy of component solutions) and team level (correct overall solution).

The platform enables systematic experimental manipulation of key MTM dynamics, such as time pressure, visibility of individual performance, and transparency of AI use. A central manipulation in the current implementation is team norms regarding AI use. Although research on AI in teams is growing, little is known about how individuals engage with AI while embedded in multiple teams. In particular, whether AI alleviates or exacerbates coordination costs, cognitive load, and cross-team knowledge transfer remains underexplored. By varying AI use norms, the platform allows examination of their effects on individual effectiveness, knowledge sharing, and team performance, as well as potential spillover effects across teams.

We have successfully developed the platform and have conducted pilot tests with students at two large public universities. Initial results are promising, showing that the platform captures the complexities inherent in MTM environments while being simple enough to use effectively without formal training. In the short term, our goal is to establish feasibility and demonstrate the platform's value for research and pedagogy. In the long term, we envision expanding the platform to enhance its realism, flexibility, and practical applicability.