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Superteam Transactions: The Effect of an Intelligent Assistant in Virtual Teams

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SUPERTEAM TRANSACTIONS: THE EFFECT OF AN INTELLIGENT ASSISTANT IN VIRTUAL TEAMS

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ABSTRACT

Artificial intelligence (AI) can interact as intelligent assistants that create 'knowledge networks' to connect people with topics and content and present relevant information to research teams. This assistance is increasingly available to virtual teams conducting work in dispersed locations, yet we still know relatively little about the impact of AI on virtual team performance. This research will examine knowledge sharing and application among virtual teams using intelligent assistants relative to transactive memory systems.

Keywords

Artificial intelligence, intelligent assistant, virtual teams, knowledge sharing, knowledge application, transactive memory systems

EXTENDED ABSTRACT

The 2020 Deloitte Global Human Capital Trends report identifies emerging advancements in artificial intelligence (AI) that are enabling humans and machines to interact in new ways (Deloitte Insights, 2020). Deloitte uses the term "superteams" to represent the integration of AI into teams. An example of such interactions includes the use of AI in a project at Microsoft to analyze and organize data that are then used to create knowledge networks for team members (Deloitte Insights, 2020). In many instances, the integration of AI into teams has taken the form of an intelligent assistant that provides relevant information when needed by aiding in knowledge sharing, application, and collaboration. Opus Research refers to 2021 as "The Year of the Ubiquitous Intelligent Assistants" noting that the use of intelligent assistants in businesses has grown significantly due to the COVID-19 pandemic (Miller, 2021). As a result, organizations have expanded the use of intelligent assistants in teams.

Team performance among virtual team members is dependent upon the sharing and application of knowledge during the execution of work. Virtual teams are in a unique position relative to knowledge sharing and application since they rarely, if ever, meet face-to-face and rely upon technology-mediated communications. Temporal, geographical, and cultural differences serve to create barriers to knowledge sharing and, thus, the effective application of knowledge when needed (Kanawattanachai & Yoo, 2007).

Understanding the impact of knowledge sharing and application among virtual teams should involve socio-cognitive processes. Transactive memory theory, developed by Wegner (1986), is based on the view that individuals serve as external memory aids for other individuals. Individuals thus depend upon each other to remember specific knowledge domains, and a transactive memory system (TMS) develops among team members based on a shared understanding of who knows what within the group (Kanawattanachai & Yoo, 2007). Kanawattanachai and Yoo (2007) demonstrate that virtual teams with developed TMS can effectively coordinate tasks and knowledge among team members.

Specifically, this research seeks to understand: (1) What is the impact of an intelligent assistant's relationship between transactive memory systems and knowledge *sharing* within virtual teams? (2) What is the impact of an intelligent assistant's relationship between transactive memory systems and knowledge *application* within virtual teams?

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