Building Intelligent Tutoring Systems for Teams

What Matters

Research on Managing Groups and Teams

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About the Book

This volume presents multidisciplinary perspectives from leading scholars in the science of teams and intelligent tutoring systems (ITSs) on research needed to advance the state of the art of team ITSs. Our esteemed authors provide lessons learned to guide future research that will produce the technical capabilities needed to support team skills development. The introduction by Drs. Robert Sottilare and Eduardo Salas, who are leaders in the field of ITSs and team science, discusses the challenges and approaches to building ITSs for teams. The volume’s first section introduces concepts for understanding team training such as team task analysis, team macrocognition, measurement strategies for dynamic processes, and effective team training methods to provide insights into ITS design. Section two presents recent advances in team assessment and feedback through unobtrusive assessments, modeling dynamic team interactions, neurodynamic scaffolding, and collaborative tutoring strategies. In the Volume’s third section authors discuss lessons learned from past research, provide a discourse on the five disciplinary perspectives of engineering, learning sciences, team research, data analysis, and human computer interaction to create a framework for guiding team ITS developers, and examine the team ITS requirements for long term space travel. The final chapter summarizes and integrates lessons learned and provides recommendations for future research and development.