Chapter 8
Information Sharing and Psychological Safety in Virtual Teams

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ABSTRACT

Virtual teamwork has become a regular part of life for student teams. However, there is still much that is unknown about the factors that contribute to effective collaboration among virtual teams. Research has shown that psychological safety is essential for team performance, but virtual teamwork creates additional psychological distance between team members that may make developing this vital climate factor challenging. As newly formed virtual teams navigate challenging tasks, they may feel compelled to focus more on tackling the task than developing social relations needed to support psychological safety. This can impair the development of team climate factors that support long-term team success. This chapter investigates how virtual teams may navigate challenging tasks while still supporting the development of group dynamics such as psychological safety, collective efficacy, and team

DOI: 10.4018/979-8-3373-0375-8.ch008

viability. To illustrate and further investigate these topics, this chapter describes a recent empirical study in which teams faced tasks of varying difficulty using a virtual reality paradigm.

INTRODUCTION

Communication, information exchange, and knowledge sharing are the keys to success in all forms of teamwork. In education, team-based projects are growing increasingly popular as a learning tool and are widely used in experiential learning. However, when the 2020 COVID-19 pandemic hit, and the world shut down, all of these exchanges of information had to occur virtually. This created a "digital divide," with the ability to communicate and collaborate gated based on communities' unequal access to technology (Sosa Diaz, 2021). This digital divide created additional challenges in which some students, such as students of a lower socio-economic status, first generation students, and those from marginalized racial groups, are less prepared for virtual collaboration than others (Bonfadelli, 2002; van Dijk, 2017; Cotten & Jelenewicz, 2006). For instance, a Pew Research Center (Pew Research, 2021a) study identified that 80% of white adults own a computer or have broadband internet access, whereas only 69% of African American adults and 67% of Hispanic adults do. Access is further stratified based on income; among households earning less than $30,000 annually, only 57% have broadband internet access, and only 59% have a home computer. Among households earning $100,000 or more, these statistics increase to 93% and 92%, respectively (Pew Research Center, 2021b).

Since the pandemic, students' varying familiarity with online learning tools, and the integration of remote or online e-learning platforms in brick-and-mortar classrooms have outpaced our knowledge of how to best support students in higher education (Cobo-Rendón et al., 2022). This effect is particularly salient for students collaborating in virtual teams. Since team-based, project-focused learning in the classroom is a vital tool for encouraging active learning and teaching teamwork skills, it is crucial to understand how to best support teamwork among students who may be collaborating remotely. Nemiro (2004), for instance, describes several factors necessary for successful creativity and performance in virtual teams, including the vital role of team climate. This chapter examines some of the key challenges associated with remote collaboration, specifically those that can predict information sharing among team members.

In particular, the chapter will explore several team climate factors that predict such information sharing and performance, using a recent empirical study involving the use of virtual reality technology to examine team interactions in distributed teams, where members have differential access to information. Such a situation is

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Trina L. Hoefling (2026). *Cultivating Creative Collaboration in Student Virtual Teams in Higher Education: Design and Climate (pp. 37-70).*
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