Virtual Collaboration in Distance Learning Environments: A Case Study

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ABSTRACT

This case study compares technology tools and communication practices of two virtual groups to understand how these vary between academia and the workplace. A group of professionals working virtually is compared to a group of distance learning graduate students, and conclusions are drawn regarding how to better prepare students like these for the future of virtual work. Task-based conversations within the groups are examined. Results may help distance educators understand what tools students should have access to depending on the tasks required in an assignment. It may also help determine what kinds of transferable technology skills our students need prior to entering the workforce. Findings include suggestions for educators regarding how to approach group work in online educational environments, such as making considerations for multiple technologies that serve various purposes and support collective collaboration. A technology matrix is provided for determining which collaboration technology tools to use along with guidelines for making such decisions.

KEYWORDS
Computer-Mediated Communication, Conversation Analysis Decision-Making, Educators, Groups, Information Exchange, Media Richness, Online, Social Interaction, Students, Task-Based Conversation

INTRODUCTION

Technology has changed the way we work and learn, yet the tools we use for both purposes are often different. Current learning management systems have yet to provide all tools necessary for the day-to-day functions of the distance learning classroom, so many educators supplement by requiring other tools and technologies. As more people are working virtually, distance learners could potentially bring with them a new skillset in virtual collaboration. Collaboration and social engagement must be an integral part of the academic environment (Bruffee, 1997). The ability to collaborate effectively is a particularly important skill within the workforce, and debate about how best to train students to become successful workplace collaborators has been going on for decades. In order to develop effective workplace collaborators, “classrooms need to at least occasionally simulate the much more complex organizational environment so that all students can try out different collaborative techniques in a more realistic setting” (Cross, 1994, p. 133). But in the twenty-five years since Cross wrote that,
organizational environments have changed. In an effort to cut costs, increase productivity, and attract better employees, many organizations are turning to virtual work (Rice et al., 2007; Martins et al., 2004). Likewise, colleges are experiencing ballooning interest in online degree programs wherein students never meet face-to-face. Virtual environments require a different set of collaborative skills than their traditional counterparts. Collaboration becomes more problematic when communication depends on technology and one’s expertise with it. However, educators are still responsible for ensuring that students develop work-ready skills in collaboration, whether it be online or face-to-face. The following case study will examine a small group of students working virtually on a class project and compare their experience with that of a small professional group also working virtually on a project. It seeks to understand how the communication technology and collaboration tools supported or hindered their ability to effectively collaborate. Finally, it makes recommendations for thoughtful approaches to using collaborative technology in online courses.

Collaboration among professionals is changing, in part due to the new affordances of communication technology. Virtual groups are becoming more common in the modern workplace and bring with them a surge of interest in how these groups communicate for optimal performance. Researchers have defined virtual groups in many, varied ways, though some find them more difficult to define since their meaning varies across institutions (Chudoba et al., 2005). Essentially, they are “an ad hoc collection of geographically dispersed individuals from different functions, specialties, or even organizations [...] constituted to complete a specific, complex task” (Suchan & Hayzak, 2001, p. 175). These groups are known to collaborate across space, time, and organizational boundaries because of their use of communication technologies (Fuller et al., 2011).

Virtual groups are often temporary and project-oriented, which could be a cost-saving endeavor for an organization; further, they are responsive, nimble, adaptable and competitive (Suchan & Hayzak, 2001; Martins et al., 2004). They communicate primarily through computer media, using synchronous tools that enable live web conferencing as well as asynchronous tools ranging from forums to wikis. Proponents of computer-mediated communication have argued that it removes the biases of seniority, occupation, and gender, thus promoting equal status and participation among group members as it shifts the focus of communication from the contributor to the message (Ocker, 2007). Virtual collaboration research has sought to better understand the unique challenges faced by virtual groups and how to train professionals for virtual collaboration. Virtual workers require a better understanding of collaborative technologies and processes in order to understand how to interact effectively in these innovative environments. Academic online programs, therefore, should respond by providing students with the most effective communication tools for virtual work. Although there has been a lot of research on online education, there’s been noticeably less research on the impact of student interactions in online learning (Faja, 2013).

The following research examines how two different virtual groups experience collaborative processes using the technology provided to them. It seeks to better understand how virtual groups collaborate on tasks using these tools and how they navigate technology challenges so that we may improve the process in distance learning environments. It will address the following two questions: how do virtual groups collaborate on a project given the spatial and technological limitations of their online environment and in what ways does the technological infrastructure help or hinder their collaboration?

**BACKGROUND**

Teaching collaboration means highlighting the culture of the workplace, which can be difficult for academics who are not abreast of the current collaborative climate in the workplace. We know that in today’s workforce distributed work is becoming more common (Paretti et al., 2007; Spinuzzi, 2007). Further, collaborative learning “is the means to deep understanding and shared metacognitive awareness” (Garrison, 2011, p. 131), so teaching virtual collaboration is increasingly necessary as
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