

Millennial Teamwork and Technical Proficiency's Impact on Virtual Team Effectiveness: Implications for Business Educators and Leaders

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ABSTRACT

The successful completion of information systems projects is already a difficult process that many times ends with projects failing to meet the information systems requirements. These requirements typically center on completing projects that perform the way initially envisioned, and delivering completed projects on time and within budget. Pressures around communication and leadership style are now compounded by the use of virtual teams. The goal of this study was to determine whether or not technical proficiency in the project-based skills, facility with database management systems development, and greater technical proficiency in coping within the virtual environment contributed to the development of greater virtual team effectiveness. This study targeted millennial students at the Maine Business School who were assigned to virtual teams tasked with developing a database management system within a virtual environment. Findings suggest that increased proficiencies in project skills will contribute to greater team effectiveness and more importantly, increased proficiencies within the virtual environment will contribute to greater virtual team effectiveness. These findings have implications for business educators and by natural extension, business practitioners as they suggest that training students and workers how to communicate, collaborate, exchange ideas, and share information better within virtual environments will improve virtual team effectiveness which should translate into greater virtual teams project outcomes.

KEYWORDS

Team Effectiveness, Technical Proficiency, Virtual Environment, Virtual Environment Proficiency, Virtual Team Effectiveness, Virtual Teams

INTRODUCTION

Increasingly, organizations are using virtual teams to accomplish business goals (Zivick, 2012). Martins, Gilson, and Maynard (2004) reported that the use of virtual teams that use technology to interact with each other across geographic, organizational, and other boundaries are becoming very common in organizations (p. 805). Not only are virtual teams used more frequently in organizations, Brandt, England, and Ward (2011) stated that firms report these teams must have the ability to be constructed rapidly and be extremely adaptable to meet each individual project's goals. Kayworth

and Leidner (2000) reported that many benefits are derived from these virtual teams: cost reductions, cycle-time reductions, integration of distant members, and improved decision-making and problem-solving skills. Arguably, the significance of virtual teams is best stated by Hargrove (1998) who stated: “in the future, the source of human achievement will not be extraordinary individuals, but extraordinary combinations of people.” Despite the increased use of virtual teams, they experience many of the same problems of face-to-face teams. Blackburn, Furst, and Rosen (2003) stated that there is “no guarantee that virtual teams will reach their full potential and that as many virtual teams fail as succeed in completing assigned tasks / projects. According to Marks, Sabella, Burke, and Zaccaro (2002) a few of the problems facing any team include: poor team member composition, incomplete knowledge of project goals, and poor coordination processes. As research on virtual teams continues to grow, an acknowledgement of the lack of interpersonal skills and human relations in virtual teams persists. This fact was acknowledged by Gonzales, Nardi, and Mark (2009) when they found that while collaborative technology had improved over the years through better human-computer-interaction (HCI) design, strategies that explored how to “work better” within these collaborative environments were still not adequately addressed.

Hagen (1999) posited that the problems associated with virtual teams are primarily related to the leadership abilities and the attributes of the virtual team leader. Almost 10 years after Hagen’s research, Morris (2008) found that the biggest problem with virtual teams was not the technology, but rather how people were managed throughout the virtual team project. Morris stated the problem for leaders of virtual teams is that they must juggle technology, people, and tasks, while ensuring virtual teams achieve their objective. Morris suggested that members of a virtual team need to be inspired, motivated, and emotionally invested in the virtual team project. This can be difficult in virtual environments where there is little face-to-face time. While leadership has been found to contribute to the success or failure of virtual teams and collaboration technologies have definitely improved over the years, this paper asked whether or not technical proficiency also contributes to overall virtual team effectiveness. Two types of technical proficiency are associated with virtual team effectiveness. The first is the team member’s proficiency with the technical skills specific to the project (e.g., database design) while the second proficiency is that team member’s ability to cope with the virtual environment. Both types of effectiveness are linked to strong, documented influence on the quality of virtual project outcomes (Graham, Daniel and Doore, 2015).

Virtual Teams

Virtual teams according to Brandt, England, and Ward (2011) are made up of individuals working together who may have never met and often will not meet face-to-face during assigned projects. There are many variations of the definition of virtual teams. Virtual teams, according to Green and Roberts (2010), are geographically separated teams that have little face-to-face contact and are dependent upon computers and telecommunication technologies to communicate with each other. Martins et al (2004) developed their own definition of virtual teams as “teams whose members use technology to varying degrees in working across locational, temporal, and relational boundaries to accomplish an interdependent task” (p. 808). Martins, et al. added that virtual teams are teams first, and that the ‘virtualness’ is a team characteristic. Powell, Piccoli, and Ives, (2004) stated that virtual teams are “groups of geographically, organizationally, and/or dispersed workers brought together by information and telecommunication technologies to accomplish one or more organizational tasks” (2004; p. 7). Today, computing technologies are not limited to computers. Kock and Nosek (2005) stated that people working together from remote locations can also use other electronic devices for communication such as the telephone. Today, the telephone would include smart phones with texting

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