E-Collaboration in Organizations

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INTRODUCTION

Organizations are shedding conventional work team structures in favor of virtual team structures that are increasing in popularity (Lee-Kelley, Crossman, & Cannings, 2004). E-collaboration enables collaboration between individuals not constrained by geographical distance or time. The emergence of the virtual team concept provides organizations with an alternate approach to managing work and individuals that are geographically separated (Gatlin-Watts, Carson, Horton, Maxwell, & Marltby, 2007). An advantage of virtual teams is that organizations can tap into resources rapidly to create a specialized work team that acts like a team, works like a team but doesn't look like a typical team because team members may not be co-located (Stough, Eom, & Buckenmyer, 2000). E-collaborative technologies such as computer-based conferencing systems are of critical importance to the success of a virtual team (Arnison & Miller, 2002). In the absence of water-cooler philosophizing, virtual teams rely on technology to build trust between team members, resulting in greater synergy and ultimately team success in carrying out work tasks (Arnison & Miller, 2002; Stough et al., 2000). The article focus is on technological and organizational aspects of e-collaboration occurring today and forecasted for tomorrow. The specific topics addressed are e-collaboration in organizations, e-collaboration in organizations of today, specific e-collaboration success factors and future trends of e-collaboration in organizations of tomorrow.

BACKGROUND

Collaboration is simply described as individuals working together while sharing information (Yen, Wen, Lin, & Chou, 1999). E-collaboration is merely taking collaboration to an electronic level. The expansion of the Internet has created opportunities to increase business collaboration, resulting in enhanced information sharing while reducing the amount of uncertainty in decision-making resulting in better profits (Rudberg, Klingenberg, & Kronhamn, 2002). E-business consists of more than buying and selling of goods and services on the Internet, as it also entails the servicing of customers and collaborating with business partners. Information management both internally and externally is an increasing concern for organizations as paper-based systems can be very slow, prone to error and difficult to update. With a growing interest in e-business solutions that facilitate information sharing between organizations, organizations within a supply chain are looking to achieve greater synergies with e-businesses and specifically participation in e-collaboration. By integrating e-collaboration in supply chain services through an electronic marketplace, companies are able to work together more efficiently through sharing vital information to assist in supply chain activities without the implementation of expensive EDI networks. With the globalization in business, e-collaboration has become almost a requirement for an organization to successfully compete in the marketplace in terms of optimizing productivity, quality and ultimately profits (Yen et al., 1999).

E-COLLABORATION IN ORGANIZATIONS OF TODAY

Contemporary workplaces are allowing employees to work from home and other off-site locations which are changing the view of traditional organizational work teams (Rudberg et al., 2002). Over the last decade, organizations are becoming flatter resulting in the need to increase the number of virtual teams that bring internal and external people with diverse disciplines together (Dustdar, 2005). These virtual teams survive based on a combination of mobile and fixed people, devices and applications. E-collaboration technologies influence how people process, manage and manipulate information, which is useful for both co-located and virtual work teams (Rudberg et al., 2002). E-collaboration provides a mechanism for virtual teams to accomplish work tasks while providing the foundation for productive team work accomplished through nontraditional means. Team-based structures in workplaces are common and in great demand because work teams are often comprised of individuals with different backgrounds due to the nature of work being multidisciplinary as well as global. In working on joint projects between businesses, there can be a reduction in the risks, making innovation less costly for any one business with regard to new ventures.

There are several e-collaborative technologies available today that allow organizations to have instant communication within a business, between businesses or between businesses and consumers (Rudberg et al., 2002). The range of activities that e-collaborative technologies support is e-mail to videoconferencing to file sharing, regardless of geographical time and distance. Groupware commonly consists of e-mail, computer-based conferencing systems, collaborative writing, programming and drawing systems (Stough et al., 2000; Yen et al., 1999). Groupware enables virtual teams to experience more traditional group life because team members can interact with each other by actually seeing each other and jointly manipulating information real-time. Groupware can also be called Teamware, as the focus of both is in assisting groups or teams in successfully performing work, whether helping a face-to-face team with brainstorming anonymously or helping distributed teams see each other through videoconferencing (Yen et al., 1999). Technology is useful for the exchange and sharing of information (Yen et al., 1999). There are many different products available which integrate several features such as e-mail, calendaring, instant messaging, multiperson chats or discussions, mobile, wireless, social software, team collaboration, e-forms, enterprise-wide discussion forums, team spaces, Web-conferencing, instant remote access control, instant desktop sharing, two-way file sharing, online meetings and Web-content management (Bal & Teo, 2001).

However, technology alone will not constitute virtual team success. Teams that switch from a collaboration to an e-collaboration environment will likely experience a transformation process that involves complex team dynamics and work processes that at first may create new challenges. For example, virtual teams may need to find alternative ways to form trust between team members, as water cooler philosophizing as a way for team members to form bonds don't exist as easily in virtual teams (Arnison & Miller, 2002; Stough et al., 2000). Early literature of the 1930s and 1940s approached conflict as dysfunctional for group dynamics, resulting in researchers studying causes and prevention of conflict (Passos & Caetano, 2005). Later literature discussed other views such as the human relations' approach, where conflict was viewed as natural or even positive for teams to experience, resulting in studies to identify situations where conflict was either good or bad for team dynamics. Conflict is another aspect of teams where virtual teams have an added challenge when resolving. Molleman (2005) suggests those individual team members' attributes such as age, skills or personality traits can be noticeable, which can lead to subgroups and possibly result in conflict among the subgroups. Group cohesion, mutual trust and team efficacy can be shared team characteristics, provided e-collaborative technologies aid in relationship building for teams (Bal & Teo, 2001; Molleman, 2005).

ACHIEVING SUCCESS TODAY AND TOMORROW WITH E-COLLABORATION

E-collaboration technologies enable virtual teams or even face-to-face teams to be more productive and therefore successful. When considering a virtual team, it is important to also consider all of those factors which contribute to the team's success. With most virtual teams being separated by geographical time and distance, it is not surprising that a team's success can be greatly influenced by the availability and capability of technology (Stough et al., 2000). Aside from specifically e-collaboration technologies, team members that have access to different knowledge databases also have greater opportunities to have successful collaborative efforts in developing new ideas, products, markets, strategies, organizational designs and visions (Shani, Sena, & Stebbins, 2000). Technology assists in all collaborations, making it easier for individuals with different backgrounds to come together and virtually resulting in higher creativity and innovation. Technologies such as the Internet, e-mail, groupware, video-conferencing, cellular phones and intranets will continue to aid in information sharing and communication between team members (Arnison & Miller, 2002).

There are several identified sources that lead to creative performance as being resource availability, leadership, group size, group cohesiveness, communication patterns and group diversity (Molleman, 2005; Shani et al., 2000). Furthermore, the structure of group interaction within teams significantly impacts team members' creativity. The work on a team can be delegated best when team members are aware of each other's skill set even when tasks are unclear (Cruz, Perez, & Ramos, 2007). Technology has been a contributor leading to improvements in communication for virtual team members through enabling more closely knit work teams (Arnison & Miller, 2002). Of equal importance, the virtual team must be able to keep up with any new technologies utilized to aid team performance. Training in e-collaborative technologies may be a necessity for the vitality of virtual teams. Technologies have drastically improved, yet the mobility of technology is still in need of being improved, as employees need to have the ability to work anytime anywhere in order for an organization to compete globally in the marketplace.

Virtual teams must have a purpose and vision to ensure that every team member is focused and understands the goals of the team. If a virtual team lacks productive interactions, the effectiveness of the team could be compromised (Arnison & Miller, 2002). Because virtual teams may not have a chance to check-in with their team members as often as face-to-face teams, team members must be provided with clear goals to help the team in achieving a cohesive contribution (Arnison & Miller, 2002; Bal & Teo, 2001; Molleman, 2005). Team members in a virtual team as well as a face-to-face team must have an identity within their team through having