

Team Development of Virtual Teams

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Advanced technologies, globalization, the competitiveness of business, flexible working practices, and other rapid changes in the nature of work have all led to the booming of “virtual teams.” This paper will provide an overview of virtual teams, including a description of their emergence, a definition and typology of the term “virtual team,” an examination of their benefits and pitfalls, and suggestions both for overcoming the challenges and for incorporating business strategies in virtual team building.

Keywords: Virtual Teams, Team Development, Virtual Team Building Strategies

Traditionally, teamwork was conducted by specific people who worked in the same office for the same organization. Today, rapid changes in the nature of work and advanced technologies make it possible for people to work at home. Furthermore, increasing globalization, competitiveness in the business world, flexible working practices, and the need to respond quickly to changing customer demands have all led to the emergence and booming of “virtual teams” (Eom, 1999; Bell & Kozlowsky, 2002). Information technology has played a major role in facilitating the proliferation of virtual teams and has enabled multinational organizations to connect employees from all over the world (Merrick, 1996). Virtual teams have come to suit today’s more flexible and adaptive organizational systems, structures, and processes, conforming well to those changes (Bell et al., 2002). Virtual teams will no doubt play a key role in shaping organizational design and change in the future. However, the distances separating virtual team members and the sophisticated technology often utilized to connect them have both proven to be barriers to their success. Due to time constraints and the rush to implement virtual teams, companies have faced some problems. Previous research has demonstrated that the implementation of virtual teams in the absence of sound planning and design can lead to large problems (George, 1996).

This paper aims to provide an overview of virtual teams, including a description of their emergence, a definition and typology of the term “virtual team,” an examination of their benefits and pitfalls, and suggestions for overcoming the challenges that they present and for incorporating business strategies in virtual team building. The paper will give suggestions on how to enhance effective development of virtual teams to meet business purposes.

Emergence of “Virtual Teams”

According to Townsend (1998), the increasing predominance of flat organizational structures, inter-organizational cooperation as well as competition in market places, changes in employees’ expectations for organizational participation, shifts towards service/knowledge work environments, and increasing globalization have precipitated the creation and growth of virtual teams. New generations of information and telecommunication technology have also functioned as prime facilitators. As a result, more flexible virtual teams have adapted to the current trends in marketplaces by providing the impressive productivity of team-based designs in new environments where teamwork once would have been impossible. Now ubiquitous, virtual teams have been shown to possess their own, unique problems, as well problems similar to those faced by conventional teams; these will be discussed in the “challenges” section below.

Definition and Typology of Virtual teams

Virtual versus Conventional Teams

Virtual teams have unique characteristics that make it possible to differentiate them both from conventional teams and from one another. Virtual teams are defined as the latest form of teams whose members share a common purpose and who use technology to cross time zones, distance, and the boundaries of organizations and/or cultures (Lipnack, 1999b; Noe, 2002). Almost all rely upon digital technology (e-mail, Internet, video conferencing) to interact and complete their projects (Noe, 2002).

Virtual teams and conventional teams are similar in that both groups have tasks, goals, or missions to accomplish (Bell et al., 2002). However, virtual teams differ because of the spatial distance separating their

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members and because of the nature of their communication (information, data, and personal). First of all, virtual teams are made up of team members who are from different geographical locations, different organizations or parts of the organization, and who identify as a team for different lengths of time (Bell et al., 2002; Cantu, 1997; George, 1996; Lipnack, 1997). Next, the ability of members to transcend their spatial separation is effected by various communication technologies, ranging from common and simple ones such as email to more advanced, complex and interactive ones such as videoconferencing, groupware, and project management programs (Bell et al., 2002; Geber, 1995). These two different features enhance work effectiveness since virtual teams are able to access unique information and highly specialized expertise through varied and diverse sources as well as through synchronous communication media adopted for a specific task. According to Lipnack (1999b), virtual teams have three primary components: purpose, people, and links. Autonomous, self-reliant but still interdependent people work together under common purpose through links (i.e., connections); this is the case not only for virtual teams but also for “real” or conventional teams. The most useful and appropriate connections, that is, communication technologies, should be employed according to the specific purposes and people involved.

Benefits and Challenges

Benefits

Geographically dispersed virtual teams allow organizations to access and retain the most qualified individuals for a particular project regardless of their location, since they have complementary skills, work under a common purpose, have interdependent performance goals, and share an approach to work for which they hold themselves mutually accountable (Gould, 1999). They enable organizations to respond faster to increased competition and to provide greater flexibility to individuals working from home, those on the road, and those across organizations (Bell & Kozlowski, 2002; Stohr & Peterwson-Qwest, 2002). Using a combination of technology and virtual teams, many companies are increasing technology and knowledge transfer, increasing the speed of solutions, and decreasing delays between customers and suppliers or between geographically dispersed employees (George, 1996).

Virtual teams can also link separate organizations to achieve common goals (Jennings, 1997; Lipnack, 1999a). A practical example from the publishing world demonstrates the potential of virtual teams. *Esquire*, *Men’s Health*, and *Rolling Stone* are three of the four largest men’s magazines, with a combined circulation of about 3 million. Together they equal the circulation of the fourth magazine in this category, *Sports Illustrated*. They learned to put their competitive instincts aside and cooperate for their mutual benefit. They used virtual teams to cross their physical and corporate boundaries to put together a highly lucrative deal. Another example is the strategic collaboration, partnering, or outsourcing of computer hardware and software developers such as in the case of Intel and Microsoft.

Challenges

Communication technology serves to connect us to information and people around the world, but it also inhibits genuine human or personal interaction, which could be one of the potential pitfalls of virtual teams (Emelo & Francis, 2002). This can create problems, especially for those projects that depend upon interdependent processes between virtual team members. Due to their lack of face-to-face interaction, members of virtual teams must learn to bridge their psychological gap in order to bring about the mutual trust ultimately necessary for effective work.

Other communication problems of virtual teams are as follows: (1) lack of project visibility—i.e., situations in which team members understand their individual tasks, but fail to see how their tasks fit into the whole project; (2) lack of visibility of teammates’ schedules; (3) absence or delay of immediate response; (4) equivocality of message due to constraints of the technology (Gould, 1999).

Software designed just for virtual teams, called “groupware,” such as Lotus Notes and Exchange, is growing increasingly sophisticated. Videoconferencing programs are also available, but so far they have proven to be both expensive and difficult to manage, requiring too much bandwidth to be practical (Gould, 1999). Team members’ different levels of access to team resources may exclude some from fully participating in the group; therefore, the availability of acceptable bandwidth should be established first, and then the most appropriate communication and collaborative technologies should be selected. Time and cultural differences should be taken into account when selecting communication technologies (Robb, 2002).

Due to time constraints and the rush to implement virtual teams, companies may underestimate the need to plan and design around the differences inherent in these teams. Previous research has demonstrated that the implementation of virtual teams in the absence of sound planning and design can lead to large problems (George, 1996).

Creating virtual teams is not as easy as pulling together a cross-functional team to solve a problem. Because the makeup and locations of the team can be quite heterogeneous, unprepared team members experience mistrust,

unrealistic or unequal expectations, cultural differences, poorly coordinated work logistics, problematic group dynamics and difficulties with leadership (George, 1996).

Guidelines When Implementing Virtual Teams

How should virtual teams be implemented? Research suggests that companies start with a few easy projects before gradually expanding these tools into enterprise-wide activities, that is, that they pilot-test the implementation of virtual teams (Gould, 1999).

To implement virtual teams, several challenges must be overcome. They can be divided into two big categories: (1) problems in practical business practices and (2) those in communication technologies.

Guidelines in Practical Business Practices of Virtual Teams

Guidelines for the successful development of virtual teams in practical business practices are as follows.

First, clear goals and objectives, clear guidelines for expectations, and standards of excellence should be set to improve people's virtual-collaboration skills and efficient virtual team interaction (Larson & LaFasto as cited in Thomsett, n.d.; Lipnack, 1997; Emelo & Francis, 2002).

Second, planning and design are keys to virtual team success (Cantu, 1997). The design of the organization, the team, and the job are the bases for building a successful virtual team. How should virtual teams be built to avoid collision? Organizational, job, and team designs, coordination of work through technology, interaction with stakeholders, and members' re-entry into the host organization should be considered: (1) When it comes to organizational design for virtual teams, the team's business goals should be defined, team values should be established, an infrastructure for involvement should be developed, and the configuration and boundaries of the team should be designed to enhance productivity; (2) for job design, a realistic job preview (George, 1996) and job accountability (Lipnack, 1997) should be defined, decision-making authority should be given to the team (Mohrman, 1995), compensation issues should be discussed with team members (George, 1996), and feedback for employee development and should be provided; (3) for team design, the team members should be identified first, and identity should be created as a mental model. Purpose, goals, and objectives should be stated and connections between people should be established (Lipnack, 1997).

Third, specialist climate/leadership by expertise on the subject matter should be respected rather than hierarchy or ranks in order for all team members to participate with their creativity any time.

Fourth, it is desirable that all team members participate in all business processes, including the establishment of a project overview and project objectives, the detailed analysis of the project's expected benefits and the articulation of a plan for realization of the benefits, the creation of a statement concerning the required quality of the product (i.e., a quality agreement), the evaluation of project costs, the establishment of project development strategies, of project risk assessment/risk management plans, of relevant legislation and policies, of project staffing agreements, assumptions and constraints, and of a project execution plan (Thomsett, n.d.). All members of the project should be completely involved in building the project business case. This set of information is built during the planning process and is the "contract of service" between the project manager, the sponsor, the virtual team members and the project stakeholders. It is essential that all virtual team members understand and share totally the commitment to both managing and achieving the project's business case.

Fifth, personal relationships between team members should be developed to assure mutual trust and to enhance interaction, effectiveness, and productivity (Cantu, 1997; Lipnack, 1997). Virtual teams should be grounded in mutual trust since they are made up of team members from different cultures, locations, and technical backgrounds. Virtual teams need guidelines that enable the team to set personal as well as team expectations for what they are and are not allowed to do. Cultural differences should be taken into account. Response and collaboration are important to achieving superior speed-to-market or complex business problem solutions.

Sixth, team members' accomplishments should be duly recognized through praise, particularly since they don't meet face-to-face. Praise should be made public through appropriate communication technologies in order to increase members' morale. Depending on the characteristics of individual team members, personal recognition should be carried out either through e-mail, a telephone call, or a voice conference call to make praise public and to ensure that everyone hears it at once (Gould, 1999).

When it comes to the procedure of creating and developing virtual teams, Robb (2002) proposed that the first step be to determine which collaborative process best suits the given project. Next, the most appropriate information communication technology should be provided in order to meet the missions, goals, and objectives of the process. The importance of planning and designing the whole process of a project with collaboration of IT and HR before implementing virtual teams should not be overlooked. Consider various cultural and technological factors as well as corporate differences.

In addition to these factors, the work must be coordinated through technology and the stakeholders in the project must interact and keep each other updated. Lastly, when the employees finish a project and must re-enter the host organization or another virtual team, planning by both the team members and the host organization is essential (Cantu, 1997).

Guideline to Communication Technology of Virtual Teams

Virtual teams need advanced information communication technology to share databases, spreadsheets, proposals, and presentations. Electronic communication through video conferencing, groupware software, newsgroups, bulletin boards, electronic mail, and intranets may be employed by virtual teams. They need a practical and convenient way to discuss options and prioritize alternatives without having to spend their most productive time in expensive face-to-face meetings. Because virtual teams often operate over the telephone or computer, they have less face-time in which to build rapport. Thus, group dynamics are more difficult to manage.

First, virtual teams need training, experience and organizational support in order to communicate virtually with effectiveness (Noe, 2002).

Second, effective and skillful use of information and communication technologies depends on the goals of the project and on the complexity of the task; the most advanced technology is not necessarily the best choice.

Third, collaborative technology is needed for HR practices. The visual dimension adds a very powerful means for team members to establish and maintain trust through team activities (Grundy, 1998). Efficient coordination of work through communication technology is needed for effective team activities: (1) to reduce equivocality of message, if at all possible include face-to-face time to create an effective working environment, especially for interdependent team projects; (2) to enhance visibility of a project or a teammate's schedule, give team members a sense of how the overall project is progressing by sending copies of the updated project schedule or an electronic view of the project schedule and do not let team members disappear by using the Internet or workgroup calendaring software or by providing electronic mail with a distribution list; (3) to avoid delay, establish a code of conduct; (4) complement text-only communication with the use of the Internet to store charts, pictures, or diagrams; (5) develop trust. Virtual teams require trust to succeed. Leadership on virtual teams will likely be determined by expertise on the matter at hand, not by corporate hierarchy (Gould, 1999); (6) develop a back-up plan (Plan B); (7) to solve time-difference problems, focus more on asynchronous collaboration tools (Robb, 2002). Establish local tech support for team members operating in remote locations so that they may participate fully in group activities.

Finally, virtual teams benefit enormously from face-to-face meetings. Few virtual teams are 100% virtual. If tasks are based mainly on interdependent interaction, face-to-face meetings are worth being held periodically to overcome psychological distance.

Team Building of Virtual Teams and Business Strategies

The ways of building and maintaining productive virtual teams need to be explored. The benefits, challenges, and the ways to overcome challenges have been explored. How do we take advantage of virtual teams for business strategies?

A task force team (TFT) is one of the powerful organizational tools for coping with complex, interdependent, and short-term tasks in rapidly changing uncertain business environments and is used to deal with temporary problems and opportunities that cannot be handled as effectively or efficiently by the existing organizational structure. It is a form of horizontal contact designed to solve problems across multiple departments, made up of representatives from each of the affected departments (Cleland, 1996; Galbraith, 1971). A TFT is usually dismissed once its assigned task is completed. It is well known that traditional TFTs have several limitations and problems due to organizational and technical causes. Virtual teams are formed based on cost-effectiveness and product uniqueness without regard for organizational sizes, geographic locations, computing environments, technologies deployed, or process implemented (Eom, 1999). Virtual teams are able to overcome the limitations of tradition teams. Thanks to computer-mediated communication technologies such as e-mail, computer conferencing systems, telewriting systems, multi-media e-mail, and group support systems, virtual teams can communicate and accomplish goals regardless of their members' physical locations (Eom, 1999), ultimately profiting their host organizations immensely.

Conclusion and Implications

Virtual teams are the product of the nature of modern business and advanced technology. Virtual teams will not replace all conventional teams. Rather, they supplement them and add new capabilities. Marketplaces in the 21st century will reward companies who employ virtual teams as these groups' benefits are increasingly strengthened and

the challenges they pose are overcome. To develop successful virtual teams, solutions both to practical business-practice problems and to communication technology problems should be presented. That is, if team members possess a thorough understanding of the project processes (e.g., clear missions, goals, objectives, and so on) from beginning to end, and if they make efficient and appropriate use of communication technologies that are well-suited to the nature and complexity of the task, then they will meet with success (Kozlowski et al., 1999; Lipnack, 1999a, 1999b).

The increasing predominance of flat organizational structures, inter-organizational cooperation as well as competition in market places, changes in employees' expectations for organizational participation, and increasing globalization, new generations of information and telecommunication technology all have foreseen the growth of virtual teams. As a result, more flexible virtual teams have adapted to the current trends in marketplaces by providing the impressive productivity of team-based designs in new environments. Interrelationship between team members and communication skills in virtual team setting must be developed. The importance of work force development for virtual teams has emerged accordingly, which can be a focus of HRD in the 21st century.

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