Research Article

MANAGING VIRTUAL TEAMS

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A R T I C L E I N F O	A B S T R A C T
	When employees and team members are dispersed geographically and usually communicate via video conferencing or any other technology, then they are said to constitute a virtual team. Virtual teams have become a new trend and challenge in the corporate world in modern times. Even the leaders who manage these virtual teams have been given a new identity called e-leaders. Virtual teams have to not only manage diversely located employees but also different languages, time zones, cultures, ideologies, situations and many more both internal and external factors while working together. These virtual teams tend to use real time communication software systems in order to integrate their work. The paper focuses on some of the aspects of managing the virtual teams and also what all obstacles have to be faced by the e-leaders while working with teams worldwide. Along with these it will also focus on the type of communication systems used for collaborating the work. Lastly, the factors which will contribute to the success of these teams are also enunciated.

INTRODUCTION

Martinić, .(2009) has stated in the paper that virtual teams are those teams which comprise of members distributed among different geographical location, time zones, cultures and environment. The literature has also referred virtual teams as "*distributed teams*". The main crux of these virtual teams is the use of internet, intranet or other technological means to communicate. The main element of collaboration and cooperation plays a pivotal role for these teams and here is when the virtual team management comes into the picture. The main reason for handling virtual teams is the companies taking up geographically dispersed projects with the motive of making profit. Communication is the common thread which integrates all the elements and members of these virtual teams. Abbasnejad *et al*.(2012) have highlighted the other reason for the evolving of the virtual teams is the increasing globalization. This has further lead to the increment in the complexity of jobs and dynamicity of the markets; eventually making it the mandatory for the companies to go for a dispersed and diversified approach. Thus, companies are now working with geographically dispersed employees and thus managing the virtual teams.

Characteristics of Virtual Teams

Ebrahim *et al*. (2012) in their paper virtual team and management challenges have characterized the virtual teams, and have distinguished them from others, the characteristics are as follows:

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- These are geographically dispersed among different time zones.
- These teams are driven by a common purpose.
- Usually the size of teams is small.
- The main element of integration among the team members is technological communication.
- These teams are usually involved in cross boundary collaboration.
- In many cases the team is not of permanent nature.
- Team members are knowledge workers, who share knowledge from different sectors of the world.

Kimball .(1997) in her speech on Managing Virtual teams introduced some more features of the virtual teams. These are as follows

- The team membership has a flexible aspect; the positions keep on shifting according to the situation and conditions.
- Most of the members are associated with multiple virtual teams.
- These teams form and reform on regular basis, adjusting as per the diversity nature of the market and cultural differences of the place.
- The teams also have multiple levels reporting system; the teams have to function at various levels of the organization

Types of Virtual Teams

Ebrahim *et al*.(2012) have advocated the various types of virtual teams, depending on the location and the number of members involved. These are as follows

- **Teleworker -** this type is a miniature form of virtual group, which further ads up to the virtual team as a whole. There is only one manager at a particular location and the telecommunication is done outside the work place. More than one teleworker form a virtual group which in turn forms a virtual team.
- **Remote Team-** this type is applicable when one manager is distributed across various locations.
- **Matrixed Teleworker-** this type is when there are multiple managers of the team at one location. This can also be said as opposite of remote teleworker type.
- **Matrixed Remote Teleworker-** this is the combination of the remote team and the matrixed teleworker, there are many managers of the team at multiple location. All communicate through internet
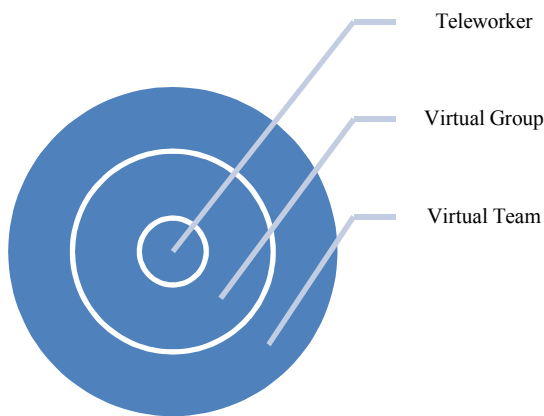

Figure 1 Relationship between Teleworker, Virtual Group and Virtual Teams

Source: Ebrahim, N. A., Ahmed, S., & Taha, Z. (2012). Virtual Teams and Management Challenges Academic Leadership Journal

Kimball .(1997) also contributed to the differentiation done among the virtual teams, taking other aspects into consideration. These were as follows

Executive Teams- these teams comprise of managers who have gained the membership of the team du e to their position in the organization. These teams tend to be temporary in nature; they are formed for some specific divisions or functions of the organization.

Project Teams- these teams are also formed for a particular task and remain for the whole life of that particular project. These teams comprise of the experts in a particular field.

Advantages and Disadvantages of Virtual Teams

Martini . (2009) depicted the positive side of the virtual teams through the following aspects.

Advantages

- right mix of personnel, cost-effective
- global sourcing
- shorter product development cycles by utilizing time zone difference
- More flexible employment, engagement and administrative structures for employers.

Cornelius et al.(2012) enunciated the beneficial element of the virtual team through some more factors

- Improved collaboration with other business units.
- Faster response to opportunities which eventually leads to improved competitiveness.
- Improved collaboration with customers, suppliers, partners.

Ebrahim et al.(2012) argued about the disadvantages related to the working of virtual teams, which were as follows

- Requires complex communication technologies.
- Management conflicts
- Difficulty in determining task technology fit.
- Prone to mistrust, communication break-down.
- Training and skills development required for the employees.
- Face-to-face communication is more effective at times in certain situations.
- Costly due to use of expensive technology.

Factors Determining the Success of Virtual Teams

Cornelius *et al*.(2012) contributed to the literature, the factors which would lead to efficient working ad success of the virtual teams.

- The goals so set, must be achievable and clear in terms to the team members.
- The organization should make it sure; that the team members get a chance to meet each other in person at least once; for increasing the understanding levels of their communication.
- The company should also follow a set code of practices for conducting the meetings.
- The members should be provided a sense of ownership of the project as a whole.
- The right kind of members, with the right skills should be added to the team.

Software Tools Used for Managing the Virtual Team

Martinić .(2009) stated that, with the high intensity of diversity, long distance and different time zones factor; the use of software tools becomes necessary in order to manage and consolidate the members of a virtual team. Many a times the integration has to be done not only in one single virtual team, but between more than one virtual team. And here is when the system software becomes the catalyst of amalgamation. Due to the same reason the software are seldom called Groupware also. Following are the various soft wares' used, for managing the virtual team:

Same Time-Same Place & Same Time-Different Place- these soft wares' are called synchronous groupware support system, because they are used for live inter-project collaboration and synchronization of the work.

Different Time-Same Place & Different Time-Different Place- these soft wares' are also called as asynchronous groupware support system, since they are used for independent team member engagement on the project.

Table 1 Groupware categories and service

SAME TIME Synchronous	DIFFERENT TIME Asynchronous	
Voting, presentation support	Shared computers, documents and messages	SAME PLACE Co-located
Chat, videophone, telephone	e-mail, workflow shared data-stores	DIFFERENT PLACE Distance

Source: Martinić, A. (2009). Virtual Teams

E-Leaders

Abbasnejad *et al*.(2012) stated that, the virtual team leaders are often referred to as E-Leaders since, they have to manage the team through internet and technology and not just face-to-face communication.

Table 2 Level of collaboration in virtual team

Levels	Nature of efforts	Team productivity	Process/tasks	Application
Communicative	Dialog and common understanding, information sharing	Minimal	Informal or semi-formal communication, unstructured chaotic.	Email, chat, news groups, computer mediated communication
Collective	Individual separate tasks	Sum of individual performance	Minimal Integration	Word Processing, Spread sheets, Graphics
Cooperative	Group-based, uncoordinated	Sum of individual performance	Ad hoc, separate tasks towards common goals	Net meetings, application sharing
Coordinated	Sequential team precedential	Sum of sequential individual performance	Chronological, sep-by-step, work-flow oriented	Work-flow
Concerted	Mutual communal	Sum of individual and ad hoc team and coordinated team performance	Synchronized, flexible, repeatable, customized	

Source: Martinić, A. (2009). Virtual Teams

Group Support System/Group Decision Support System- it acts as a communication backed by technology driven environment, which help to collaborate the work among geographically dispersed team members. This software provides the team members with wide range of applications, which tend to eliminate the travelling costs and minimize the information sharing costs also. This software helps in the decision making activity also at various levels in the virtual team.

Chat and Meeting Tools- this software allow the team members to communicate with each other in real-time using various means like- typing, voice and video aids. The pre-requisites for this mode of communication are appropriate application installed at all ends, headset, microphone, video camera and other programs to support the overall process. Some common tools used are as follows: G talk, Skype and many more have been added to this list in recent years. Moreover some basic web-based programs are also required like Microsoft office live meeting, Adobe Breeze, HP Virtual Meeting rooms etc.

Information Sharing Tools- the main backbone of team work is the right information shared at the right time and the right place with the right person. The information sharing tools are calendar, file galleries, forums, bulletin boards, content management and work flow management.

Wikis-these are the collaborative websites which allow the users to edit information. All the activities are done in real-time using the browser.

Levels of Collaboration in the Virtual Teams

Martinić .(2009) also reviewed about the different types of virtual teams and various kinds of cross-cultural dimension within these teams, justifying that the level of collaboration will differ depending on the above-mentioned factors. The level of collaboration also plays a major role in management of these virtual teams as a whole. The level of collaboration covers various aspects in its periphery i.e. nature of efforts, process and tasks, team productivity and applications used to communicate. Below is the overview of the various levels of collaboration being found in virtual teams.

have three main functions to perform- team liaison, team direction setter and team's operational coordinators. As Team Liaison, these E-leaders need to ensure that all the activities and events are scrutinized on time among all the teams and team members. As team direction setter the E-leaders need to define clear cut goals for the team members and if the leader manages more than one virtual team then he/he must determine clear goals for all the teams. And as team operational coordinator the E-leaders should ensure that the team members have all the required resources for accomplishing team tasks.

Challenges Faced by a Virtual Teams and E-Leaders

Serrat .(2009) threw light on the challenges and obstacles faced by virtual teams on daily basis. Following are the various challenges that these teams have to cross in order to work successfully:

Electronic and collaborative technological access- the team members from all corners of the world need access to communication and collaboration technologies. This comes with the expenses to be incurred and also the internet access which is sometimes difficult to be found in remote areas.

Organizational Culture- recognition leads to promoting the culture of virtual teams and also is a way to motivate the team members to perform with more efficiency. Also it will motivate others to join the virtual team and contribute to the overall organizational goal.

Virtual Teams issues and E-leader- when dealing with cross-cultural virtual team issues, the management must take care that, if the issues are not resolve on time, they may percolate in the other teams as well; and here is when the need of effective and skilled e-leader comes into the picture. The e-leader should have all the required qualities to manage teams working in different locations, time zones, and cultures and yet working for the same organizational goal.

Abbasnejad *et al*.(2012) added on some more complex situations and events which the virtual teams had to face and cross which managing the business.

Building Trust- Building Trust is one of the most difficult challenges faced by the E-leaders while managing a team. The leaders should try to create opportunities in order to develop the trust. One of the ways to create trust is to foster cultural understandings.

Cultural Diversities- since the members of the virtual team belong to different cultures and thus have different perceptions and views regarding various things. The cultural diversity can pose a great challenge when managing a virtual team. And therefore, the E-leader should try to minimize these cultural differences and should take these into consideration while taking decisions for the team as a whole.

Factors Required for the Effective Functioning of the Virtual Teams

Ebrahim *et al*.(2012) have articulated that, there is still ambiguity around the topic of which factors will make these virtual teams function in more effective and efficient manner. A lot of research has been conducted on the same, but due to the dynamic and uncertain corporate world; along with increasing competition, no exact factors have been found out. But according to a literature review following have been considered as major factors contributing in the effectiveness and efficiency of the virtual teams:

Communication being the most important factor of all; since the only medium of the team members being integrated is communication. The E-leaders need to provide proper feedback to the team members in order to clarify the confusions if any. And also make the team goals and the organizational objective crystal clear to them.

There should be common understanding between the E-leaders and the other team members. The leader should ensure that all his team members are satisfied with the tasks assigned to them. And if any problem persists then the leader needs to handle the situation taking the human element into consideration. The understanding is one element which distinguishes human assets with mechanical assets.

The E-leaders should also ensure that the roles, tasks, responsibilities, authorities, accountability and all the other aspects related to the job are clear to the team members to avoid any misunderstandings and conflicts in future. When everyone will know what to do, how to do, when to do, why to do; then there will be no ambiguity and any conflict.

The leadership style followed by the team leader will also have a direct impact on the effectiveness and efficiency of the working of the virtual team. The leader should neither be too bossy nor be too lenient. The proper mix of various leadership styles will have a positive effect on the overall virtual team.

CONCLUSION

The paper was reviewed to gain more knowledge about the virtual teams and all the various aspects related to their management. The Virtual team which are also know as distributive teams have gain more importance in the recent times, with the companies now doing business at the global level. These teams have communication as the common thread which collaborates and integrates the various elements of these teams. The team members are characterized to be knowledge workers, who work towards cumulating their knowledge from the various sectors in order to get things work. There are various types of virtual teams which play a major role in global sourcing, flexible employment, improved collaboration and coordination; these are teleworker, remote workers, matrix teleworker and matrix remote teleworker. Also many new additions have been made in the structure of virtual teams resulting in two new forms of virtual teams as executive teams and project teams. These virtual teams also have a harder side which makes it complex in managing them; the difficulty in determining the technological fit, the management of conflicts, the complex communication mediums and also the required training and development to be provided which may incur huge expenses for the company. Coming on to the software tools used for the better management of the companies there are mainly 4 type of tools used, which are the combination of the following four variables: same time, same place, different time, different place. And also there are group support systems, chat and meeting tools, information sharing tools and wikis. The collaboration in these virtual teams is exercised at various levels, and at each level there are different applications used to manage the collaboration; the levels are as follow: communicative level, collective level, cooperative level, coordinated level, concentrated level. The virtual teams are not whole sole self drivers, there are E-Leaders who manage the teams, and face various challenges in the course of managing the teams. Lastly, the paper also suggests various factors which are required for the successful functioning of the teams, which include: proper feedback from the e-leader, common understanding between the team members and the e-leader, and a harmonious relation between the team members and the team leader. Having discussed about the structure, advantages, challenges, levels of collaboration and required factors; virtual teams are the future of the corporate world, and will play a major role in the Human Resource field.

Refernces

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