Southern Cross University
ePublications@SCU

Southern Cross Business School

2002

Virtual teams: a virtue for the conventional team

Linda Arnison
Southern Cross University

Peter Miller
Southern Cross University

Publication details

Arnison, L & Miller, P 2002, 'Virtual teams: a virtue for the conventional team', *Journal of Workplace Learning*, vol. 14, no. 4, pp. 166-173.
The publisher's version of this article is available at http://dx.doi.org/10.1108/13665620210427294

ePublications@SCU is an electronic repository administered by Southern Cross University Library. Its goal is to capture and preserve the intellectual output of Southern Cross University authors and researchers, and to increase visibility and impact through open access to researchers around the world. For further information please contact epubs@scu.edu.au.

Post-print of: Arnison, L & Miller, P 2002, ' Virtual teams: a virtue for the conventional team', *Journal of Workplace Learning*, vol. 14, no. 4, pp. 166-173.

Virtual Teams: A Virtue for the Conventional Team

Linda Arnison
Peter Miller

The authors

Linda Arnison and Peter Miller are faculty members of the School of Social and Workplace Development at Southern Cross University, Lismore, New South Wales, Australia.

Keywords

Virtual, Communications, Teams, Technology.

Virtual Teams: A Virtue for the Conventional Team

Abstract

While some modern organisations have established 'virtual work teams', which are said to be comprised of people who are geographically separated and who work across boundaries of space and time using computer driven communication technologies, it is also true that many organisations remain structured around conventional face-to-face teams. Increasingly, the conventional face-to-face team is endeavouring to increase its productivity by utilising some of the technology and characteristics of the virtual team. In fact, it may not be practical any longer to draw a distinction between conventional face-to-face teams and virtual teams due to the invasive nature of technology throughout most modern organisations.

Introduction

Embracing the technological revolution is a considerable challenge for most organisations. The internet and the dot.com phenomena in particular have transformed many ‘old-economy’ workplaces into modern e-workplaces (Walker, 2000). The pressures of the ‘new-economy’ are forcing organisations to become more dynamic in their operations and adopt innovative approaches to survive and be competitive.

One approach adopted by modern organisations and identified in this paper is the abandonment of conventional face-to-face work teams in favour of the establishment of the 'virtual team'.

The work team’s ability to keep up with technological developments is one factor identified as critical to the success of an organisation. 'Virtual teams' are said to be comprised of people who are geographically separated and who work across boundaries of space and time by utilising modern computer driven technologies. Team members of virtual teams seldom if ever meet face to face (Johnson, Heimann & O'Neill, 2001).

While some modern organisations are now utilising the benefits of virtual teams, it is also true that many organisations remain structured around conventional face-to-face teams. Increasingly, the conventional face-to-face team is endeavouring to increase its productivity by utilising some of the technology and characteristics of the virtual team. In fact, it may not be practical any longer to draw a distinction between conventional face-to-face teams and virtual teams due to the invasive nature of technology throughout most modern organisations.

This paper will examine the adoption by conventional face-to-face teams of some of the characteristics of the virtual team. It will be argued that conventional face-to-face teams will remain the dominate organisational form in the mid term and despite conventional team members working in close physical proximity, the conventional team can and should function as a virtual team given appropriate resourcing and organisational support. The paper will also explore the opportunities that virtual team characteristics can bring to a conventional face-to-face team and demonstrate that the

current distinction argued in the literature between virtual teams and conventional face-to-face teams may no longer be appropriate.

Virtual Teams

Dominating recent organisational literature has been descriptions of 'virtual teams' that are said to be comprised of people who are geographically separated and who work across boundaries of space and time by utilising modern computer driven technologies. Team members of virtual teams seldom if ever meet face to face (Johnson, Heimann & O'Neill, 2001). Many authors have examined the emergence of the virtual team by contrasting its characteristics with the characteristics of conventional face-to-face teams from which many distinctions are drawn (Lipnack and Stamps, 1997; Stough, Eom and Buckenmyer, 2000; Potter, R. Cooke, and Balthazard, 2000).

Well known international organisations such as Hewlett-Packard, IBM, Whirlpool, Johnson and Johnson, Verifone and Ford Motor Company, have been the focus of recent literature regarding the successful implementation of virtual teams (Kiser, 1999; Stough, Eom and Buckenmyer, 2000). The growth of virtual teams worldwide can be attributed to the rapid pace of globalisation, increased inter-organisational co-operation and the benefits associated with its implementation which include the ability for employees to work for one organisation or several organisations, in one location or in another country. Other benefits ascribed to virtual teams include that employees do not necessarily have to be relocated to participate in a project or special task. In addition, organisations do not have to outlay funding for air tickets, accommodation and other costs for employees to engage in business at an international level (Yukl, 2002).

Verifone, maker of computerised swipe machines that read credit card details, prides itself on the fact that 3000 employees are in different locations and the use of virtual teams have been a strategy of the company since 1981. The company does not feel intimidated when an employee prefers not to relocate because staff can do the work in 'virtual space' (Kiser, 1999). Team members of the modern organisation therefore need to acquire the skills that enable them to utilise the technology and function effectively as a team in the virtual world.

Companies like Verifone have utilised virtual teams as a strategy to overcome communication barriers associated with numerous employees working in different locations. However, the technology has been the real tool for improved communication enabling virtual team members to more closely work together. The implementation of computers and telecommunications in the workplace has transformed some workplaces into what are now described as the 'e-workplace' and also transformed many employees into workers capable of performing efficiently in a mobile society. Mobility is said to be critical for any organisation competing in the global market (Schelin, 2001).

Conventional Team or Virtual Team?

Despite the almost unanimous position in the literature defining a virtual team as one where its team members are geographically separated and working across time and

space, there are occasions when a group of people can collaborate closely with each other using modern computer driven communication technologies regardless of their physically close proximity to one another.

In many respects, these more conventional face-to-face teams are communicating and functioning as if they were virtual teams with links strengthened between team members by webs of communication technologies. In these conventional teams, the new computer driven information technology is just a new additional form of communication that is only as important as existing communication channels.

When conventional team members who are working in close proximity are using the same communication technologies used by team members of virtual teams, both types of teams display similar characteristics and work processes and both could be considered to be 'virtual'. Conventional teams do not have to be in cyberspace to take advantage of the digital technologies that strengthen communication links between team members. Team members are often working in the same location but using mobile phones, PDAs (wireless personal digital assistant) and lap top computers as tools for distributing information between one another. Accordingly, conventional teams surrounded by bricks and mortar boundaries might also be sometimes classified as virtual teams, not because of the distance between team members but rather for their usage of the digital technologies that enable them to better communicate and more effectively function (Hayward, 2001).

Technology is therefore acknowledged as the fundamental driving force behind the existence of pure virtual teams and critical to its existence. Organisations using computers and telecommunications to their strategic advantage are players in the e-revolution and have the capacity to manage change so that it adds value to the organisation. Technologies such as the internet and email, groupware, video-conferencing, cellular phones and intranets extend the ability of staff to work together (Solomon, 2001).

The need for information at our fingertips has been influenced by the popularity for the latest gadget or technique that enables us to work more efficiently and effectively. Organisations cannot afford to waste time delivering information. Computers, the internet, and more recently, PDAs have been the catalysts for change in the modern e-workplace. With predictions that global usage of handheld devices such as PDAs will increase from 12.9 million units in 2000 to an estimated 63.4 million units by 2004 (Kiser, 2001), information will be reached more quickly by more workers regardless of where they are located.

Large multinational organisations with geographically dispersed employees are therefore adopting the concept of the virtual team to meet the challenges of bringing employees together and this has been the focus of recent literature teams (Kiser, 1999; Stough, Eom and Buckenmyer, 2000; Alexander, 2000) . At the same time however, many other organisations that do not have geographically dispersed staff are utilising the same technologies to enhance the communication and knowledge management of the conventional face-to-face team to make it more efficient and effective.

When conventional teams use the same technology as dispersed virtual teams, they are often operating as if they were widely dispersed staff working as part of what we

now understand to be a virtual team. This appears to be a common practice in many organisations yet there has been very little written about the advantages for the conventional workplace of incorporating the technological aspects of virtual teams as part of its functioning.

A team can work 'virtually' even when team members work in the same building, on the same floor and in the same room. The workplace that is taking full advantage of the technology to increase the productivity of its conventional teams is likely to extend its capabilities and place itself in the market with a competitive advantage. Therefore it is argued that it is **how** team members interact together rather than **where** team members are located that should define a work team as virtual.

The technology available today provides the opportunity for conventional teams to breakdown barriers of communication and improve performance and quality of output. The conventional face-to-face team can take advantage of the technology to improve response times to technical problems among work colleagues and clients.

Tools such as email provide the opportunity for conventional teams to respond more quickly to problems in the workplace. Discussion forums disseminate information quickly to a large group of people at the same time and reduce the need for frequent face-to-face meetings. Web sites also provide the interface between client and service provider and reduce the need for discussion about products and services. Clients can look at the product online and discuss any modifications with the service provider via email, phone, live chat or voice mail.

What might appear to the casual observer of a modern workplace to be workplace functioning with more conventional face-to-face teams might well be disguised as a modern team in an e-workplace operating using all the technologies one might expect in a geographically dispersed pure virtual team.

Allowing Conventional Face-to-face Teams to Work 'Virtually'

There has been a significant and rapid increase in the use of virtual teams by organisations and some authorities have predicted that virtual teams will revolutionise and create the e-workplace of the future. A number of organisations are adopting the concept of virtual teams by abolishing conventional face-to-face teams in favour of allowing employees to work from home or from mobile locations and function as virtual teams (Townsend, DeMarie & Hendrickson, 1998).

In the rush to implement the virtual team, there may be some disadvantages to be considered and some good reasons to allow face-to-face teams to remain intact but at the same time adopt the technologies and characteristics of a virtual team.

Like conventional face-to-face teams, virtual teams comprise of ‘real people’ who interact in a virtual environment. To be able to interact in the virtual environment, team members will need to gain the skills necessary to use the technology effectively with the support of the organisation and within the availability of the resources.

The resources that the face-to-face team will need to enable the team to function as a virtual team might include the internet and email, the intranet, cellular phones, virtual

chatrooms, collaborative software and facilities such as video conferencing and teleconferencing. Conventional face-to-face teams operating 'virtually' in a traditional workplace might use some or all of these facilities. However, these teams might also meet face-to-face in the hallway, talk during lunch breaks and afternoon tea and hold regular meetings as part of their daily routine to get the job done.

Virtual teams therefore might not just be defined as groups of geographically separated people but could include any team that uses technology to collaborate for a common purpose with the support of the organisation and with the necessary technology to enable the team to reach its goals.

Benefits of the Virtual Team that Might be Sought After by the Conventional Team

As indicated previously in this paper, there are several reasons for the increase in the use of virtual teams in modern e-workplaces. These include the rapid pace of globalisation, increases in collaboration between organisations and the desire by employees for more flexibility and so on.

However, there are benefits and outcomes of virtual teams that could equally be applied to face-to-face teams that have access to similar technologies. The main benefits said to occur in the virtual environment that can equally be sought after by conventional face-to-face teams include (Hoyt, 2000):

- Increased communication
- Network building
- Collaboration across organisational boundaries
- Focus on measuring contributions and outcomes
- Flexibility in work hours and job design
- Faster response times to tasks

Digital technologies enable conventional team members to enhance existing communication methods and network freely with people both inside and outside the team more regularly. In other words, the information technology is just a new and additional communication channel that enhances but does not replace existing communication channels.

Online interventions provide increased access to information, which helps to facilitate conventional team participation. In turn, access to additional information by more technology can improve team productivity. The more information on hand, the better the team communicates and the quality of work will improve.

With the aid of computer technologies, individual participation and contribution to the conventional face-to-face team can be better measured to determine the effectiveness of the team. With the ability to disseminate information quickly to a number of people, work assignments can be delegated and acted on more quickly. For example, emailing a word document as an attachment that can be readily updated and returned to the sender almost simultaneously is by far a more efficient process than non digital alternatives. Team web sites also enable staff to update information immediately for others to access and contribute to. Online discussion forums within the conventional

team enable quick responses to problems that team members may be having. A team member can post a question in the forum to the team to discuss and solve without having to move from their work station or wait until all the other team members are present.

Digital technologies also enable conventional team members to attend to problems in real time. For example, when an error is identified the team members can consult with one another at the time of identification and rectify the situation immediately. For example, if a team member is working offsite they can input data directly into the team's web-based work area for instant feedback. Any errors or recommendations can be updated as the staff involved view the content.

A further example might be when a visitor to an organisation's web site is having difficulty opening a document and contacts the support team via telephone and is given advice while both parties are looking at the same web site where the document is located. Instructions can be conveyed more clearly and provide the support team member with the assurance that the client has been able to open the document and confirm that the service provided was successful. The team member inserts instructions for other people visiting the web site to follow to prevent problems with opening the file in the future.

Minutes of team meetings can be typed directly into a word document and displayed during the meeting using an overhead projector and a lap top computer. Team members can visualise the minutes as they are being written to ensure their accuracy to avoid troublesome reviews later on. The ability to see what is being discussed in written format may reduce the chance of misunderstandings and possible delays during team meetings because of clarification requests by attendants. The minutes can also be distributed via email to all team members at the completion of the meeting, ‘virtually’ waiting upon the team members’ return to their offices and workstations.

There is a need for organisations to recognise that conventional face-to-face teams need not be completely abandoned in favour of virtual teams. Conventional face-to-face teams can take advantage of the technologies used by virtual teams and become early adopters of the work practices that enable teams to gather what they need to know, when they need to know and share the information the best way they know how in order to increase performance (Schelin, 2001).

Disadvantages of Pure Virtual Teams

There are other reasons why conventional face-to-face teams with access to virtual technologies might be a more appropriate organisational solution than the implementation of pure virtual teams.

There are distinct disadvantages for pure virtual teams whose members only interact in cyberspace and rarely if ever meet face-to-face. Way (2000) makes this point in the following statement:

> *‘Without the opportunity to access the usual cues and clues of daily interaction, a small misunderstanding can quickly escalate into an intractable resentment”*

Technical hitches with computers and telecommunications can prohibit communication with other team members. Without the convenience of alternatively walking down the corridor to someone's office or driving across town for a face-to-face meeting, the problem compounds and team members can feel isolated and abandoned.

A lack of productive interaction between team members can prohibit the effectiveness of the team. Communication problems can be associated with technical difficulties such as file sharing problems, server connection failures, power failures and any other telecommunication failures that prevent teams from networking.

Associated with the technical problems is the loss of identity as a team member. In virtual teams, just like conventional teams, members need to be provided with clear goals in order to make a cohesive contribution. Team members need to have an identity within a team and an understanding of their reason for being there. They also need to know what the other team member's roles are. Poor interaction between members due to lack of understanding their roles can lead to distrust among members and reduce the opportunity for cohesiveness.

Team members working from home may feel isolated from other team members because of their locality and the lack of opportunity to interact not only at a working level, at a social level as well. The weekly morning tea get together in the workplace where people interact socially and get to know one another is not readily available for the 'virtual' worker. He or she will not be able to participate in discussions in the morning tea room nor take advantage of the get-together to meet new employees of the organisation. In the pure virtual team, the opportunity to meet is most likely to be during a telephone conversation, an email, via video conferencing or perhaps in the team's discussion forum. The face-to-face interaction, the usual incremental first step taken when meeting new people in the traditional workplace, may be considered an expensive last resort measure for meeting new team members in virtual teams.

When virtual teams converge on a web page and post new information, management of the information that is added is crucial to avoid confusion among team members with regard to which is the latest addition to the web page. Web communication tools such as web log software enable updated information on web sites to be kept in chronological order. Although an effective tool for knowledge management, these systems can cost $US150,000 or more (Alexander, 2001). However, knowledge management systems need to be in place when team members are working in different locations to ensure performance is not jeopardised because of communication problems.

Teams are traditionally described as small groups of people who come together combining their skills for a common purpose. Group cohesiveness will be determined by several factors but in particular, by the level of interactivity that occurs between members and when a clear vision and shared goals can be identified (Yukl, 2002). The inability for new members of pure virtual teams to personally meet fellow team members can have a direct impact on team performance. Team members may be unsure about their role in the team or the objectives of the team because they have not socially identified with one another at a face-to-face level. Personal interaction with

one another provides an opportunity to not only put a face to a name but also to develop a feeling of trust in a person. Contributing towards online discussion forums or teleconferences without having met their team members face-to-face first may affect a person's confidence in providing a worthwhile contribution.

Self-managed teams, unlike traditional work groups, usually have informal leaders or may share the leadership role among its members (Yukl, 2002). Virtual teams could be likened to self-managed teams because of the distinct independence that exists due to the distance between team members. Effective leadership is therefore essential for the successful functioning of the pure virtual team, particularly if the skills and knowledge that team members have acquired are diversified. The diversity, combined with distance, could create conflicts because of increases in communication barriers.

The Transition from a Conventional Team to a Face-to-face Team with Virtual Characteristics

A major reason that many virtual teams exist today at global and local levels is a result of the emergence of the new-economy. The new-economy is a revolution characterised by the phenomenal acceleration of change, flexibility, knowledge, innovation, communication and displacement of employees (Zadek, Hojensgard, Raynard, 2001). Virtual teams have evolved to meet the demands of the new-economy and meet the needs of diversity in the workplace.

Workers today have the ability to access current information literally at the click of a mouse 24 hours a day, 7 days a week. As technology improves there is a rapid acceleration of interactivity and dissemination of information among team members.

Conventional teams that also utilise technology to allow them to act 'virtually' have an array of options for interacting with one another; ranging from knocking on their colleague’s door, leaving a voicemail message, emailing or meeting with them in the virtual classroom. As the technology improves, interactivity improves and the pressures from team members for better work design and processes increase. The upgrade of resources to the team needs to keep pace with the changing rate of technology to allow for the purchase of capital items such as new computers and software upgrades. The organisation’s financial support to the team is therefore crucial to the evolution of the team from a more conventional modus operanti to a team that functions virtually.

The success of the evolving team will depend on whether or not team members are 'self-starters' and capable of working with little or no supervision. Team members who can use their own initiative and perform a task with little or no assistance or solve a problem without the guidance of other team members may evolve faster than the team who has members who find it difficult to take on responsibility.

Team members will need to be responsible and accountable for achieving the tasks set before them. Feedback to the team to ensure tasks are completed on time is critical if the team is going to achieve its objectives. Strong leadership is also essential to ensure deadlines are met within the set timeframe to overcome the possibility of disagreements and to ensure progress is continuous and positive.

Team members must be competent with the digital technologies associated with pure virtual teams. Without the necessary skills required to confidently work in a digital environment the capacity to achieve the team's objectives may be limited.

Access to information provided to all team members will determine the success of the team's ability to perform well. The necessary information will need to be conveyed to all members to regulate the tasks and to ensure all activities are adequately carried out.

Support from top management will be necessary to ensure the team is allocated the appropriate non-technical resources as well. Top management must provide political support to ensure the organisation is supportive of the resources necessary to take advantage of the technology that has the potential to enhance performance. The organisational culture must be compatible with flexible working environments and virtual team characteristics, which must be encouraged by top management (Yukl, 2002).

The Future

Wide accessibility to information provides a supportive environment for the knowledge worker to be creative and innovative in his or her approaches to the task. Organisations of the future will be embracing the technology to enable their employees to absorb as much knowledge in as short a period as possible (James, 1999). To be successful however, organisations will need to consolidate their infrastructure with the technology available to stay remain competitive.

While the establishment of virtual teams by organisations appears to be rapid, the reality for most organisations is that conventional face-to-face teams will remain the organisational norm for some time to come. However, many conventional teams are beginning to adopt similar technologies to that used by the virtual team. Accordingly, more attention should be paid in the literature to the similarities of virtual teams with conventional teams who have adopted computer driven communication technologies and the benefits each can accrue from a study of their characteristics.

Modern organisations will allow conventional team members to be equipped with PDAs, to receive and deliver troubleshooting information onsite, in the car, on a plane or in any other location. Team members will spend most of their time working in virtual reality while only metres away from each other.

Emerging in the future will be numerous technology breakthroughs that will become mainstream in the workplace, just as computers, the internet, email and mobile phones have done. These new technologies, combined with the infrastructure that provide support to teams utilising the new technology will enable conventional face-to-face teams to adopt new practices that improve organisational performance.

The characteristics of virtual teams, combined with digital technologies and face-to-face communication can offer conventional face-to-face teams an opportunity to accomplish their goals and achieve their vision utilising the best features of both types of teams.

References

Alexander, S. (2001), “Will user-friendly Web log software make it easier for employees to share knowledge?”, *Online Learning Magazine*, September, p.39.

Hayward, B. (2001), “Wake up after the dot-com fry”, *BRW*, (online), 10 October 2001, http://www.brw.com.au/stories/20011004/11763.asp

Hoyt, B., R., (2000), “Techniques to Manage Participation and Contribution of Team Members in Virtual Teams”, *WebNet Journal*, Volume 2, Issue 4, p. 16.

James, D. (1999), “Knowledge workers: the great unknown”, *BRW*, online, 10 October 2001, http://www.brw.com.au/frame.asp?page=/newsadmin/stories/brw/19990222/contents.htm

Johnson, P., Heimann, V. and O'Neill, K. (2001), "The wonderland of virtual teams", Journal of Workplace Learning, Volume 13, Number 1, pp. 24-29.

Kiser, K. (2001), “Pocket-sized lessons”, *Online Learning Magazine*, July/August, p.18.

Kiser, K. (1999), “Working on world time (managing work teams with geographically dispersed members)”, *Training*, Volume 36, Issue 3, p. 28(7).

Lipnack, J. and Stamps, J. (1997), *Virtual Teams: Reaching Across Space, Time, and Organizations with Technology*, John Wiley and Sons Inc., Canada, p. 7.

Potter, R. E., Cooke, R. A., Balthazard, P. A., (2000), “Virtual team interaction: assessment, consequences, and management”, *Team Performance Management*, Volume 6, Number. 7,8, pp. 131-137.

Ross, E. (2001), “Staff: Love the job”, *BRW*, (online) 15 March 2001, http://www.brw.com.au/stories/20010206/8765.asp

Schelin, E. (2001), “TeleCon: An e-learning adventure?”, *E-learning Magazine*, (online) 10 October 2001, http://www.elearningmag.com/issues/apr01/experiences.asp

Solomon, C. M., (2001), “Managing: Virtual Teams”, *Workforce*, (online), 12 July 2001, http://www.workforce.com/feature/00/07/62/

Stough S., Eom, S., and Buckenmyer, J., (2000), “Virtual teaming: a strategy for moving your organization into the new millennium”, *Industrial Management & Data Systems*, Volume 100, Number 8, pp. 370-378.

Townsend, A., DeMarie, S. and Hendrickson, A., (1998), "Virtual teams: Technology and the workplace of the future, Academy of Management Executive, Volume 12, Number 3, pp. 17-29.

Walker, J.W. (2000), “E-leadership?”, *HR. Human Resource Planning*; Tempe; Volume 23, Issue 1, pp. 5-6.

Way, N. (2000), “HR: A new world of people power”, *BRW*, (online), 10 October 2001, http://www.brw.com.au/frame.asp?page=/newsadmin/stories/brw/20000616/contents.htm

Yukl, G. (2002), *Leadership in Organizations*, 5th edn, Prentice-Hall Inc., New Jersey

Zadek, S., Hojensgard, N., Raynard, P. (2001), *Perspectives on the New Economy of Corporate Citizenship*, Copenhagen Centre, Copenhagen, p. 17.