Leading Structurally Dynamic Virtual Project Teams

Research-in-Progress

Petros Chamakiotis
University of Sussex
Brighton BN1 9SL, UK
P.Chamakiotis@sussex.ac.uk

Niki Panteli
Royal Holloway University of London
Egham TW20 0EX, UK
Niki.Panteli@rhul.ac.uk

Abstract

While the dynamic nature of virtual project team (VPT) membership has been recognized, limited research exists on the implications of this for team performance and leadership. Therefore, our study seeks to understand how leadership can be exercised in order to enhance cohesiveness when new members join and disrupt the 'normal' VPT lifecycle. Here, we use preliminary findings from Phase 1 of our study, which involved ten VPT members in the financial services industry. Our findings unpack challenges associated with dynamic membership, and also start to explain what leadership practices might be effective in helping VPTs to adapt in light of the issue of dynamic membership. In Phase 2, we will build on these findings and address our aim above with additional interviews that will allow us to explore the subject in depth. Our expectation is to contribute to the literature on membership-related VPT discontinuities, VPT leadership, and the VPT lifecycle.

Keywords: Virtual teams, geographically dispersed teams, leadership, team adaptation

Introduction

While the dynamic nature of virtual project team (VPT) membership has been recognized in the early literature (e.g. Bell and Kozlowski 2002) as well as in recent studies (e.g. Gilson et al. 2015; Wageman et al. 2012), limited research exists on the implications of this for team performance and leadership. Literature has argued that dynamic groups are different to stable groups in fundamental ways including their structure, process and performance (Choi and Thompson 2005). If this is the case, we ask how do dynamic VPTs — those that experience changing membership during the project lifecycle — can be effectively managed?

In their attempt to identify effective leadership practices, researchers have referred to key phases of the VPT lifecycle, describing the practices that leaders should adopt during each phase in terms of facilitating interactions, developing synergies and improving the overall team performance (Collins et al. 2013; Zander et al. 2013). According to this literature, the three phases of the VPT lifecycle include: the welcoming, performing and wrapping up phases and within each phase appropriate leadership behavior and practices are identified. Though these VPT lifecycle models are useful in showing the different stages of team development and in identifying effective leadership practices within the different stages, the models fail to show the changing nature of team membership, that is members may drop in and out of the team regardless of the team’s lifecycle stage. As such, existing models do not accommodate for leaders’ adaptation practices and therefore do not show how leaders can build cohesiveness when new members join and disrupt the 'normal' VPT work process.

Drawing from the above, in this paper, we aim to examine how VPT leaders adapt their behavior and practices when faced with changing team membership. We argue that this is particularly challenging in the context of VPTs due to the technology-mediated character of work. Considering the newness of this
topic, we selected a qualitative approach through a series of semi-structured interviews. The preliminary findings from Phase 1 of our study — which took a focus on 10 VPT participants at a global UK-headquartered organization in the financial services industry — posit challenges associated with leadership practices in cases when VPTs had to adapt and start to explain what leadership styles might be appropriate in these cases. Phase 2, which is presently being conducted, will draw on interviews with 40-50 VPT participants from the same organization.

In what follows, we first present the theoretical foundations of our study and then outline our methodology and preliminary findings from Phase 1. Following, we unpack our expected contributions and outline what we will be discussing at the conference.

**Theoretical Foundations**

Virtual collaborations are commonplace nowadays, they work across geographical, temporal and organizational boundaries (Malhotra et al. 2007) and this has been found to affect how individuals interact at the team, organizational, and societal levels (Panteli 2009). As such, the recent information systems (IS) and management literatures recognize that project teams have increasingly become virtual, though this is to different degrees (Griffith et al. 2003). However, not all VPTs are the same as they can differ in terms of degree of continuity (temporary vs. permanent), degree of virtuality (hybrid vs. pure virtual), and degree of dispersion (local vs. global), among others (Griffith et al. 2003; Panteli 2003). VPTs are known for their unprecedented benefits and challenges (e.g. Jarvenpaa et al. 1998), and scholars have sought to examine how management should be practiced to address the unique challenges characterizing virtual teamwork (e.g. Bell and Kozlowski 2002; Ebrahim et al. 2009; Kayworth and Leidner 2000; Lipnack and Stamps 2000). Watson-Manheim et al. (2002) present the perspective of virtual as being applied to describe work that spans one or more discontinuities. Discontinuities, such as geography, time-zone, culture, work practices, organization and technology have been defined as factors accounting for a lack of cohesion between VPT members (Watson-Manheim et al. 2002; Chudoba et al. 2005), an argument that is also supported by faultline research (Lau and Murnighan 2005). Cohesion has consequently been recognized as an important aspect of VPT success and an essential component of intra-team socio-emotional processes (Dixon and Panteli 2010; Powell et al. 2004). The role of virtual continuities has been studied as a way of overcoming internal boundaries and building synergies among the diverse members of the team. For example, in considering socio-emotional processes of virtual teamwork, the tendency is towards viewing factors, such as well-defined team boundaries, that increase cohesion through more bonding relationships, as having a positive impact on performance (Mortensen and Hinds 2002).

The extant literature on VPTs has paid particular attention to leaders and their role in the effective management of team performance. Researchers generally agree on the importance of VPT leadership which, according to them, can effectively contribute to the establishment of group norms and explicit policies, enable coordination among members’ interactions and foster integration (e.g. Hill 2005; Kerber and Buono 2004; Wang et al. 2011; Yoo and Alavi 2004).

Leadership in VPTs differs from traditional leadership because of the challenges and the discontinuities of the distributed character of virtual work. Though some traditional leadership theories — such as the centered leadership approach — may still be relevant in the virtual context (e.g. Kerber and Buono 2004), there is consensus among researchers that leadership in VPTs is often shared (Chamakiotis and Panteli 2010; Hill 2005; Hoch and Kozlowsky 2014) and also emergent, rather than prescribed or appointed (Carte et al. 2006; Misiolek and Heckman 2005; Yoo and Alavi 2004). Regardless of how they emerged to the role, there is an acknowledgment in the literature that VPT leaders are boundary spanners, bridge makers and blenders (Zander et al. 2012) as they play a key role in promoting motivation and commitment among their geographically dispersed members (Zander et al. 2013).

Similarly, it has been found that emotional, social and transformational forms of leadership are more likely to enhance performance and levels of satisfaction in VPT contexts (Purvanova and Bono 2009; Ruggieri, 2009). Research shows that leaders of VPTs play an important role in terms of facilitating interactions and developing synergies (Zander et al. 2013). For this, Zander et al. (2013) identify a series of leadership practices which they position on the VPT lifecycle model. The model presents three key project stages: welcoming phase, performing phase and wrapping up phase.
In the *welcoming* phase, the general purpose or mission of the team is clarified, and resources and roles are allocated. Due to the members’ diversity and dispersion, it is important at this early stage to embark on a socialization process so as to promote synergies and shared understanding of the goals of the team. During the performing phase, team members are expected to complete the tasks assigned, attend meetings, report back to the team and share their work in progress with other members. The *performing* phase also involves the team moving the goal forward and meeting deadlines. Once action is underway, the e-leader will provide the team with feedback about the task and their performance. Motivating the team should occur on a continual basis. Moreover, there should be an acknowledgement and communication of what has been completed towards reaching the team’s goals during this phase. Finally, during the *wrapping up* phase the overall successes of the team are celebrated and members are prepared for redeployment to another team. The extant literature has emphasized the role of the e-leader in all three stages of the VPT lifecycle. However, what we believe is lacking from such models is an understanding of the dynamic nature of teams which may imply that members come and go at different stages of the team process, challenging in this way the team structures, processes and performance (Choi and Thompson 2005), and ultimately, leaders’ practices.

In the virtual environment, there is an expectation for VPTs to adapt to change regularly (Bell and Kozlowski 2002; Cascio and Shurygailo 2003; Ebrahim et al. 2009; Gilson et al. 2015; Marks et al. 2000; Qureshi and Vogel 2001; Wageman et al. 2012). To further stress this, Marks et al. (2000) state that in dynamic work environments — such as VPTs — it is this ability for teams to adapt that determines the degree to which a virtual team project will succeed. Moreover, in their article on the added challenges that an e-leader has to address, Cascio and Shurygailo (2003) note that “[leaders] will need to analyze the impact of the virtual work arrangements on [their] own leadership style, and adapt accordingly” (p. 363). In view of this, we turn to adaptation theory which we use as the sensitizing lens for the study.

**Adaptation as the Theoretical Lens**

Adaptation as a reaction and unscripted activity (LePine 2003) has been recognized as important in changing, uncertain and complex organizational settings (e.g. Rosen et al. 2011). Within this literature, team adaptation has received some attention, mainly by scholars in the fields of organizational psychology and management. It has been asserted that the notion of team adaptation has diverse meanings and, thus, has been used broadly and inconsistently in the extant team literature (Baard et al. 2014; Wiedow and Konradt 2011). In this paper, the adopted definition of team adaptation comes from Klein and Pierce (2001) who view adaptive teams as “teams that are able to make the necessary modifications in order to meet new challenges” (p. 4). These authors argue that despite the simplicity of their suggested definition, adaptation is a complex process, dependent on a number of dimensions which are specific to the team at hand. Woolley (2009) highlights that team adaptation behavior is important, because without it teams may be led to low performance and even failure.

Generally, there is a belief that team adaptation is linked to the notions of change, learning, innovation, performance and effectiveness (Burke et al. 2006; Woolley 2009), while it has also been argued that leadership and team coordination behaviors define the degree to which a team will be able to adapt (Baard et al. 2014; Marks et al. 2000). In the field of IS in particular, scholars have coined the term *compensation adaptation* to refer to the paradox whereby despite a general perception that face-to-face (F2F) communication is more effective and that technology-based communication presents obstacles (e.g. no body language cues), team members that rely on electronic means of communication modify their communication behavior to compensate for those obstacles, which oftentimes results in better outcomes in comparison to F2F teams (Kock et al. 2006).

As it follows, leadership and team coordination behaviors define the degree to which a team will be able to adapt (Baard et al. 2014; Marks et al. 2000). Adding to this, there is an implicit acknowledgement that VPTs need to demonstrate adaptation behavior (e.g. Gilson et al. 2015) due to their reliance on — and changing nature of — the selected collaboration systems (Sivunen and Valo 2006) and their fluidity in terms of membership and structure (Wageman et al. 2012). Prior research has determined that the use of ICTs for virtual projects requires ongoing adaptation of technology in order to structure interaction effectively so as to ensure productivity (Majchrzak et al. 2000; Poole and DeSanctis 1990). It is therefore largely due to the technology-mediated character of work that adaptation behavior might be more
challenging in the VPT context. Following from this, the driving research question and proposition of the study are as follows:

Research Question: How does the changing membership of VPTs influence leaders’ practices during the various stages of the VPT lifecycle?

Proposition: When e-leaders adapt their practices across the different stages of the VPT lifecycle, this is expected to have a positive influence on the VPT performance (Figure 1).

![Figure 1. Leaders’ Adaptation Practices](image)

**Methodology**

The qualitative case study method was deemed suitable for the data that needed to be collected as they can contribute to an in-depth understanding within single organizations (Cavane 1996; Yin 2008). In essence, this is used as a means to explore human interaction and to identify patterns of behavior that — although specific to a particular setting — can contain truth that may be applicable (Bryman 2004) in other VPT environments. Moreover, the appropriate selection of the case studies was crucial, for those chosen had to show evidence of project-specific VPTs with a dynamic structure as per our definition above. The study was designed around two Phases. The purpose of Phase 1 was to identify the different types of challenges associated with fluid membership in VPTs, whereas Phase 2 seeks to examine how VPT leaders deal with such challenges with the aim of identifying effective leadership practices for coping with these challenges.

Phase 1 of the study took place between June to August 2015 and involved a global, UK-headquartered organization in the financial services industry. This phase constituted the preliminary part of the study to help uncover themes relevant to the subject matter that can then be further investigated. Within this organization, ten interviews took place with individual members of different VPTs who were recruited on a voluntary basis via personal contacts. Our interviews involved both leaders and non-leaders in our effort to paint a more complete picture of the phenomenon under study by considering different perspectives. These and other characteristics of our Phase 1 participants are presented in Table 1. The interviews were also semi-structured in nature and lasted for about an hour each, were transcribed and analyzed thematically following the following stages: data familiarization, generation of initial codes, themes’ search, themes’ review, themes’ definition and naming, and study writing up (Braun and Clarke 2006). Findings from this phase indicate that team adaptation is a common aspect of virtual projects and this is
often a challenge for members and leaders alike, especially when limited information is provided on the reasons for the changing membership of the team. As we explain in the following section, these findings also hint at leadership styles and practices that may be appropriate under these circumstances.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Field of operation</th>
<th>Years with the Organization</th>
<th>Leadership Experience</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Male</td>
<td>Change management</td>
<td>0-5</td>
<td>Yes</td>
</tr>
<tr>
<td>B</td>
<td>Male</td>
<td>Customer experience</td>
<td>0-5</td>
<td>Yes</td>
</tr>
<tr>
<td>C</td>
<td>Female</td>
<td>Agile transformation</td>
<td>0-5</td>
<td>No</td>
</tr>
<tr>
<td>D</td>
<td>Male</td>
<td>Change management</td>
<td>0-5</td>
<td>Yes</td>
</tr>
<tr>
<td>E</td>
<td>Male</td>
<td>Customer experience</td>
<td>10-</td>
<td>Yes</td>
</tr>
<tr>
<td>F</td>
<td>Female</td>
<td>Design</td>
<td>0-5</td>
<td>No</td>
</tr>
<tr>
<td>G</td>
<td>Male</td>
<td>Business analysis</td>
<td>0-5</td>
<td>No</td>
</tr>
<tr>
<td>H</td>
<td>Male</td>
<td>Customer experience</td>
<td>5-10</td>
<td>Yes</td>
</tr>
<tr>
<td>I</td>
<td>Male</td>
<td>Customer experience</td>
<td>0-5</td>
<td>Yes</td>
</tr>
<tr>
<td>J</td>
<td>Female</td>
<td>Business management</td>
<td>0-5</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 1. Phase 1 Research Participants

Following these findings, in Phase 2, which is being conducted at the time of writing this paper, we aim to carry out in-depth interviews with 40-50 members of the same organization. This was done largely because we wanted to explore further issues that emerged in Phase 1 which might be unique to the selected organization.

The interviews follow a semi-structured approach and take a focus on effective leadership behaviors for dynamic VPTs with an expanded and fluid membership. With reference to the VPT lifecycle model, we use the three stages of the model to seek leaders’ adaptive practices. Participants are being asked to share narratives, experiences and views on this matter. Example questions include: How do you, as a leader, ensure that a new joiner integrates well without disturbing the team activities? What are the added challenges when the new joiner is in a remote location with no physically collocated teammates? Participants have to meet our selection criteria, e.g. being a member (or leader) of a VPT with some degree of fluid membership, and having been with the organization for at least one year in order to ensure that they have sufficient experience of virtual project teamwork within the specific organization.

We now turn to present the preliminary findings from Phase 1.
Preliminary Findings

First, our findings from Phase 1 start to explain the different types of challenges that VPT leaders face. One of the leaders in our study found it particularly difficult when a new VPT was formed on the spot comprising new members only. In particular, the participant highlighted how difficult was to build cohesion across the different business areas and members in the technology-mediated environment:

“"We were literally thrown together, I mean I was hired for a role and the week I came in I was told well we hired you to do that but actually you're going to be doing this [...] and also by the way you're doing to be working with people across the business [...] None of us really knew each other and we were kind of pushed in together and we then had to adapt and figure out right, we work for these two separate business units, but our job is for the greater good across [the company], so for the most part put our business unit aside and look for what's best for the overall business." (Participant C)

Another leader argued that it was the multidisciplinary aspect of this VPT in particular — coupled with the flattened management structures often characterizing VPTs — that made leadership challenging:

“"So I think, one of the [challenges] is that you don't have direct line management and ultimately you can get separation on objectives, so what I mean by that is, if you have a dev team and a business team the business objective is commercial value and the dev team is to deliver capability and if you have time pressure the dev team want to keep the requirements down as short as possible whereas the proposition team want to deliver as much value as possible so [...] so what happens is basically dev want to reduce it and business want to expand it and fundamentally it becomes challenging." (Participant E)

So how can leadership be exercised in a way to create cohesion despite the above challenges? How can the leader come to grips with such centrifugal forces within their own VPT? In view of these and other challenges that have emerged from our analysis so far, we sought to understand what a leader can do to address them and what leadership styles might prove useful. It was found that in situations where new members join a VPT — or when existing members leave a VPT early — it is important for all team members to know ‘why’ such changes are necessary:

“"Everyone gets set in their own way of doing stuff and I suppose investing time and making people understand why they are doing something, 'why' things have to adapt, again it goes back to communication and engagement, if you're honest about why things are changing what the 'rationale' for it is, it's easy to convince people of what they need to do." (Participant E)

The relevant VPT literature suggests that lack of formally appointed leaders allows for suitable leaders to emerge in the VPT context (e.g. Charlier et al. 2016; Misiolek and Heckman, 2005). However, our findings contradict these existing views in the literature by showing that a central leader might be necessary for coordinating the VPT. Specifically, our findings suggest that, especially in the welcoming phase of the VPT lifecycle, a hands-off leadership approach, or lack of leadership at this early stage, can have detrimental effects, creating confusion and delays:

“"[When the team was formed] we literally had to piece everything we were doing [...] it started all from the beginning. Massive challenges in understanding what we were doing and why we were doing it, probably a lack of leadership as well." (Participant G)

Similarly, the extant VPT literature argues that shared or collaborative leadership is helpful in VPTs given the multidisciplinary and the multi-locational aspects of VPTs (e.g. Chamakiotis and Panteli 2010; Hoegl and Muethel 2016). Our findings refute these views as well, by revealing that shared leadership may not always be appropriate in the mediated environment in which VPTs operate:

“"Too many cooks, too many leaders, so because we have a matrix organization, we have so many people that believe they are a leader in a particular area and those leaders aren't aligned in what they are trying to achieve, so if you make one happy the other might not be so happy, so, I think they struggled with getting their priorities right [...] There are so many leaders that have different agendas." (Participant A)
Expected Contributions

These preliminary findings from Phase 1 have begun to (a) unpack some of the different challenges associated with the issue of changing membership during the VPT lifecycle, and (b) explain what leadership styles and practices might be effective in terms of helping VPTs to adapt. What we are hoping to achieve with Phase 2 of our study is (a) to build on these preliminary findings from Phase 1 which played a pilot role, and (b) to reach an improved understanding of the different leadership practices that are required at each of the different phases of the VPT lifecycle (Figure 1; welcoming, performing, wrapping up) in the light of the issue of changing membership. In doing so, our expectation is to contribute to relevant IS literature on membership-related discontinuities (e.g. Watson-Manheim 2002), the VPT lifecycle (e.g. Zander et al. 2013), VPT leadership (e.g. Yoo and Alavi 2004) and the topic of team adaptation in the VPT context (Kock et al. 2006) which the extant literature has neglected.

Conclusion and Future Work

At the time of writing, Phase 1 of the study has been completed and analyzed. Preliminary findings so far identify a number of challenges associated with the issue of changing membership in particular and start to explain what leadership styles might, or might not, work best within this context. Further, Phase 2 is currently being conducted with the same organization. Building on the preliminary work we have done so far, a number of questions that are worth exploring emerge that either Phase 2 or future researchers could seek to address. These include:

- What leadership behaviors are necessary to ensure that these challenges do not affect VPT performance and how can they be practiced in view of the technology-mediated character of work?
- Given the complexity of team performance, how is effective leadership linked with successful performance and outcomes?

Finally, it is anticipated that our analysis of Phase 2 will point to the role of shared and emergent leadership in adaptation practices and following from this to extrapolate if and how the fluidity of membership facilitated certain techniques or styles of leadership, including emergent leadership.

Acknowledgements

We would like to thank the participants in the study as well as the associate editor, track chairs and anonymous reviewers for their constructive comments on the originally submitted version of this paper.

References


