Leading Complex Teams

Abstract

The word complexity is now a common feature in the management vocabulary, but are we clear about what it means for the teams that we lead? This paper reports the findings of a research project which focussed on the impact of 8 elements of complexity on teams in organisations: virtual teaming; geographically dispersed teaming; working across time zones in teams; multi-cultural teams; teams spread across organisational boundaries; teams working on complex problems; multidisciplinary teams; and teams working in a partnership or joint venture arrangement outside the boundaries of the traditional organisation. Each of these factors on their own can necessitate new and different ways of working, but the focus of this research was on team leaders who faced at least three of these eight. The methodology combined 20 in-depth interviews and an on-line questionnaire that had a response rate of 302. The results showed that a number of factors impacted on the performance levels of the teams, including the number of teams that an individual had to lead; conflict handling skills; preference for communicating by telephone to face-to-face; general leadership competence; focus on outputs; incidence of team related training; incidence of cross-cultural training; and use of HR support mechanisms. The paper offers a model of leadership styles. One of the factors that contributes to the successful management of complex teams is the devolvement of the leadership process itself to one that is shared amongst the team rather than vested in the 'team leader'. This requires the leader to change their style from the traditional manager, or even facilitator role, to one of orchestrator or improviser. The improviser can manage high levels of complexity where the level of team maturity is high. The orchestrator is still working to develop the team maturity. The facilitator exists in a mature team which is not managing complexity well, while the manager style is fast becoming redundant. Finally the paper concludes with a model outlining the factors required for success in leading complex teams consisting of leadership competencies and style; communication excellence; developing positive relationships; and team maturity and shared responsibility.

1. Introduction

The word complexity is now a common feature in the management vocabulary, but it is generally used to describe the environment in which we are working rather than the manner in which we are working. This paper seeks to clarify what complexity means for the teams that we lead and are part of. By drawing on organisational case studies, the paper draws attention to factors that impact on the success or otherwise of teams operating within complex environments. The environment in consideration is not the general business environment, but the specific work environment of the individual team member. While work may once have

been an office-based nine to five routine, most organisations are now facing complexity in the very way in which they organise themselves. For example, nearly 2.5 million employees in the UK now work from home and this number has doubled in the past eight years¹. One in three managers want more flexible working initiatives and up to 50% of managers complain of work overload². Three out of four chief executives believe the level of complexity in their organisation is higher than it was three years ago and reducing such complexity is a priority for eight out of ten chief executives³. It is estimated that 9 million overseas business trips will be made in 2006⁴ and the market for business process outsourcing is likely to reach US\$1 trillion in the same timeframe⁵. Every day managers spend up to four hours dealing with email and receive between 25 and 120 emails per day⁶. All this signifies that we are working in an environment which is creating new pressures and challenges for teams and their organisations.

In particular, the role of the team leader has come under scrutiny and may be open to false readings of performance. For example, one team leader in this study received a poor 360 degree feedback rating compared to previous occasion. Their team had recently become dispersed and they were struggling with how to communicate effectively with them, hence their reported feelings of abandonment, lack of support, and loss of clarity of the overall team objective. Another found that cultural differences and conflicting time zones lead to misunderstandings between team members spread across the UK, USA and Japan. This study focuses on the role of the team leader and their response to managing teams with increased complexity with regard to their constituents, locations, and modus operandi.

¹ Times October 6th 2005 "Number of home workers has doubled in eight years"

² Adecco research published by Microsoft in "Smarter Working" Jan 2005 ³ PriceWaterhouseCoopers 9th Annual Global CEO Survey. Jan 2006.

⁴ Key note market assessment Jan 2005

⁵ Business Insights 2005 Growth strategies in Outsourcing

⁶ Adecco research published by Microsoft in "Smarter Working" Jan 2005

2. Complex teams in context.

The first point for consideration is exactly what is meant by a complex team. Thiraviam⁷ defines a complex process as one with a large number of opportunities for failure. While teams may be taken as an entity rather than a process, it is the outcomes of a team that are of value and hence the team process that is in need of consideration. Arguably any team has a large number of opportunities for failure, but these are compounded in a complex team by the make up of the team itself. Seaver et al⁸ found that it is not only the make up of the team, but the density of its operation that affects its performance in their study of complex team networks. If the network is too dense, too much initiation may lead to the dominance of conventional ideas. If networks are not sufficiently connected, fresh ideas may emerge but remain isolated. Hence there is an optimum point in the development of a network. Aside from the propensity for failure and development of the network itself, there are specific factors which contribute to the complexity of a team. Being an international team, for example, adds to the complexity.

Canney Davison and Ward⁹ found that cultural differences will add another layer of complexity to the teams interaction when the team members are internationally dispersed. They found in their study of international teams that while some writers talk about transcending, resolving, fusing and integrating individual cultures to create a new, or 'third' team culture and a unified result, this lead to a team becoming not only uninteresting, but it became unstable and rigid. People need to retain their identity while working to a common

⁷ Thiraviam, A. R. (2006) Simple Tools for Complex Systems. *Quality Progress*. 39(6), 40-44.

⁸ Seaver, S. M. D., Malmgren, R. D., Moreira, M. S-P., Diermeier, D. & Amaral, L. A. N. (2006) *Social Cognition in Complex Team Networks*. Northwestern University.

⁹ Canney Davison, S. & Ward, K. (1999) *Leading International Teams*. Maidenhead: McGraw-Hill.

purpose and agreed way of interacting to best manage the creative tensions between global perspectives and local needs. They also found that cultural differences rarely, if ever, play out on a level playing field, with some nations holding more power within the team than others. Hence they summarised complexity as being added to international teams through:

- 1. different mother tongue languages and communication styles.
- 2. different ways of looking at the world, taking in and processing information.
- 3. different underlying assumptions about the way reality works.
- 4. different expectations about each other's behavioural norms, especially involving emotional display, decision making, conflict resolution and leadership.
- 5. different stereotypes about each other and perhaps, status within the company.
- 6. varying access to resources within the geographical spread.

This in turn leads to inherent communication and procedural complexities that need to be managed such that everyone needs to be comfortable with the decision making process or alternatives need to be found.

Barner¹⁰ defines complexity in teams in terms of a number of myths that fail to convey current realities:

- 1. Teams are intact, ie teams comprise of permanent, full-time members.
- 2. Teams are unitary, ie they are headed up by a single leader who operates within a clear and unambiguous reporting structure.
- 3. Teams are manager-led, when they are more likely to be self-directed.
- 4. Teams are equalitarian, ie they ignore the subtle power relationships within the team.
- 5. Teams are integrated in structure, ie same time zone, location and work shifts.

¹⁰ Barner, R. (2006) Managing complex team interventions. *Team Performance Management*. 12(1/2), 44-54.

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- 6. Teams are culturally homogeneous, ie all members come from the same ethnic, religious and cultural background.
- 7. Teams are encapsulated, ie they are sealed off from the fabric of their organisation. He concludes that team-building failures frequently occur when facilitators operate from team archetypes that are radically outmoded, and severely underestimate the complexity of certain team-building issues. This relates back to Seaver's work supporting the notion that it is not simply the complexity of the team that affects its functional capacity, but the way in which the team is put together and built as well.

There are benefits to be found to from complexity in teams. Diversity was found to be positively related to performance for complex tasks and negatively related for straightforward tasks in a study carried out by Higgs et al¹¹. The findings indicate that there can be benefit in considering the complexity of a task or project before assembling a team such that the degree of complexity could inform the mix of individuals to be included in the team in terms of diversity of personal traits. In addition, Simons et al¹² in their study of multi-informant data from the top management teams of 57 manufacturing companies, that more job-related types of diversity interacted with debate to influence financial performance, but a less job-related type (eg age diversity) did not. Hence increasing diversity in job-related factors rather than simply demographics can improve financial performance.

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¹¹ Higgs, M., Plewnia, U. & Ploch, J. (2005) Influence of team composition and task complexity on team performance. *Team Performance Management*. 11(7/8), 227-250.

¹² Simons, T., Pelled, L. H. & Smith, K. A. (1999) Making use of difference: diversity, debate and decision comprehensiveness in top management teams. Academy of Management Journal. 42(6), 662-673.

Having a team operate in a virtual environment is another factor that adds complexity.

OTR¹³ researched this subject during 2004 in over 300 organisations in the European Union, the US and Canada and concluded:

- most virtual teams work except for teams of middle managers which almost always fail due to lack of empowerment;
- successful teams usually apply a small set of key principles such as roles, responsibilities, agreed objectives, etc;
- the information sharing technologies required are not complex but they are critical;
- virtual teams are suitable for many part-time activities but for only a small number of full-time occupations, hence it is fine for a full-timer to be part of a virtual team for a portion of their job, but not for all of it.

Leadership of a complex team is crucial if the team is to perform well, or indeed survive. Weick¹⁴ recalls the true tale of a group of smoke jumpers at Mann Gulch - a group of 15 who knew each other but had not worked together as a team before being dropped into a fire. They also did not know the local fire ranger who was present, or the foreman. The fire surprised them and got them caught and they tried to outrun it up a hill. The task was looking fruitless. The foreman lit a fire up ahead of them and instructed the crew to lie in the area that it had burned. No one did. Instead they ran for the ridge and only 2 made it to safety. The foreman survived by lying in the ashes of his escape fire. The story illustrates that in dangerous uncertainty where there is no opportunity to confer, people cannot pay close attention to a boss who is unknown and whose commands make no sense whatsoever in the situation given what individuals are seeing. Sensemaking is about contextual rationality.

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¹³ Organisation and Technology Research Group (2004) *How do you manage virtual teams and how does technology help?* London: OTR Group.

¹⁴ Weick, K. (1998) Prepare you organisation to fight fires. In Kaltenbach, J. R. (*Ed*) The Work of Teams. Boston: Harvard Business Press.

As the crew started to unravel and lose its structure, the firefighters became anxious and found it harder to make sense of what was happening to the point that they could not understand the one thing that could save their lives - the escape fire. Clear communication, familiarity and trust were missing. Weick concludes about the need for improvisation, wisdom, respectful interaction and communication within teams if they are to be resilient groups. Ignorance and knowledge grow together, and hence real action occurs long before decisions ever become visible.

Finding a single definition of what makes a team complex is an illusive task. Various authors (above) focus on different areas. Indeed colleagues at Ashridge¹⁵ identified five factors of complexity facing teams in a previous study into this area, and we have used this model and further divided it into eight specific areas for the purpose of this current study. Each factor on its own can necessitate new and different ways of working, but for the purposes of this study we required teams to be faced with at least three of the following eight complexity adding factors:

- Virtual (i.e. team never or very rarely meets up)
- Geographically dispersed
- Working across time zones
- Multi cultural
- Spread across organisational boundaries
- Working on complex problems
- Multidisciplinary

• Working in a partnership or joint ventures outside the boundaries of the organisation.

¹⁵ Developed from Kennedy, M. & Ward, K. (2002) Making Complex Teams Work. *Innovations*.

In addition we were interested in exploring other aspects of complexity influencing the role of the team leader and their teams – namely the number of teams people work in and the size of these teams. Previous research¹⁶ carried out by the authors drew attention to the fact that people are being stretched across teams, with 69% of the sample reporting that they work with five or more teams. This adds a degree of complexity to the role of the team member rather than to the team itself.

3. Methodology

A mixed method approach was adopted combining a questionnaire with in-depth interviews. The on-line questionnaire was circulated in 2005 to all participants on Ashridge courses over the previous 5 years and 302 completed questionnaires were returned by respondents who identified themselves as working in complex teams (ie meeting at least 3 of the 8 complexity criteria outlined above). In-depth interviews were carried out with 20 individuals who were identified as leading complex teams. On reviewing the results of the team leaders in terms of performance against targets and feedback from their team members, 22% of the teams achieved higher levels of performance than the remaining 78%, and hence comparisons were made between the results of those teams who were achieving higher measures of performance outcomes with those that were not in order to get some indication of the impact of certain factors that emerged as important in the findings. This provides some clear insights into the environment and leadership approaches which can help complex teams succeed. All participants were assured anonymity so no individual or organisation shall be named in this paper.

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¹⁶ Jones, P., Holton, V. et al (2002) *People are our Greatest Assets*. Ashridge Research Report.

The most likely types of team complexity impacting on respondents are: multidisciplinary, geographically dispersed or working on complex problems. Table 1 illustrates the incidence of team complexity among the sample population.

Multidisciplinary	73%
Dispersed geographically	70%
Working on complex problems	69%
Multicultural	57%
Spread across organisational boundaries	57%
Dispersed across time zones	41%
Virtual teams that rarely meet up	41%
Working on joint ventures/partnerships	29%

Table 1: Incidence of Team Complexity represented within the sample

4. Results and Analysis

A more complex team environment brings with it some very specific challenges. The top six key challenges they faced by the team members were conflicting priorities, lack of time to meet, changing goal posts, working across time zones and cultures, and conflicting lines of report, all supported with a lack of resources.

Conflicting priorities was less prominent an issue for the teams that were achieving higher measures of performance suggesting that the ability to handle some of the factors around managing conflicting priorities could be a key factor in determining the success of a complex teams performance. An even greater difference was found between the two groups in terms of the issues of 'personality clashes' or conflict between team members, with the those teams achieving higher performance rating these issues as occurring less than the rest of the teams in the sample.

In looking at the qualitative data it seems that most of the conflict was caused by structural and environmental issues. Respondents identified issues such as differing objectives and agendas, different reporting lines, different bosses with conflicting priorities, working with partner organisations, dealing with misunderstandings resulting from communicating in a more dispersed team environment and working with people from different cultures, as key factors in contributing to the escalation of conflict in the team. For example:

"There was conflict of reporting relationships between team members that are based in Scotland and those in Africa. For our environment this is a typical front end planning problem as those involved in concept engineering tend to believe they are the experts and those on the ground feel that the theory does not match with the practice - this isn't a problem in itself but the manager may have other plans for that time."

Taking the structural and environmental issues aside, the remainder of this paper will focus on the areas more directly linked to the leadership of the teams in an effort to see how the leadership through the complexity, and management of the structural and environmental issues impacts on the ability of the complex team to achieve high performance.

4.1 Leadership Tensions

1.

The role of the team leader in recognising the challenges outlined above and working to create an environment which is conducive to complex team work is crucial. The tensions of wanting to do a good job, be there for the team, meet client needs and work effectively with others are clearly evident in the qualitative data collected. So too are the issues around 24/7 working and the pressures of online working and communication which perhaps amount to information overload. The key tensions outlined in the interviews are summarised in figure

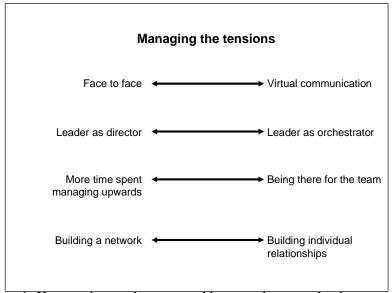


Figure 1: Key tensions to be managed by complex team leaders

Managing the balance between face-to-face and virtual communication is a major challenge. Team members who are often isolated want to talk face-to-face with their team leader yet in reality this is impossible and results in pressure and intrusions into personal life as the quotes from team leaders illustrate.

The balance between managing face-to-face interactions which are often costly and time consuming and understanding how to develop the use of other communication channels is clearly evident and is one which has implications in terms of time management and in terms of building a cohesive team.

4.2 Leader as director and orchestrator

Knowing what to be directive about and when seems to be a balancing act for team leaders.

One team leader whose team is spread across China, Mumbai and USA illustrates this well.

[&]quot;I take my computer on holiday."

[&]quot;I am always available on the mobile – I don't switch it off."

[&]quot;50% of my time is spent travelling to visit the team."

[&]quot;I often spend the evening catching up with people."

"I have to be clear about what are the important "non negotiable" issues for the new team leader and what's optional. I will be clear about what I expect of their role with local business and what the results should be."

Being clear about what to be directive about is important, but so too is the ability to take on a role as orchestrator – to know when to stand back and facilitate team success. Other leaders recognised this more clearly:

"My work is much more now about adding ideas and communicating what we are trying to do."

"It is important to give people a clear scope and remit to work to so they understand what they need to do to succeed."

The questionnaire respondents also wanted a mix of directive and facilitative behaviour from their leaders. On the one hand they wanted clear challenging goals, clear direction, more feedback, honesty, directness, the ability to confront problem behaviours and provide clearer specific objectives. Yet at the same time there was a request for more facilitative behaviour, to delegate, coach, empower, involve and listen to the team.

4.3 More time managing upwards and being there for the team

The leader of a complex team often has to balance the time between their team facing activities and the more political roles of competing for scarce resources, securing sponsorship for the team, protecting the team members, and ensuring that they get the recognition they deserve. One team leader when talking about some of her biggest challenges in managing a dispersed international team drew attention to managing the organisational issues:

"Each country has its own HR and promotional strategies which means that I have to build links with managers in each country and understand the different systems in order to help my team receive the promotion they deserve."

Understanding the politics, the hierarchy and building personal relationships is the recipe for her success in this area. This is contrasted by the importance of being there for the team:

"It's important to be there for the team when people need you and to take time to get to know people and spend time together."

"I always need to be interested. I'll ask people how things are going, pick up on the subtle hints and follow up with people. At least 20% if not more of my time is spent on this type of work."

4.4 Building a network and building individual relationships

Building a network of relationships throughout the organisation is a key role for a team leader, as is building the network within the team and between teams. Whilst the team may have a shared vision it is often the team leader who is the only one with the "big picture" and a clear understanding of how the team can work together and work with other teams.

"I spend 70% of my time communicating."

"My job is complex for a number of reasons, such as the fact that I'm expected to look at issues concerning clinical trials, suppliers, and marketing. Not all of these are within my expertise but I can call on colleagues, and more senior managers, elsewhere in the company. I also can discuss these issues within my team and we often find that sharing the problem this way means we can find the answer."

"I am responsible for a global sales team. None of the team report directly to me and I am reliant on the sponsorship and support of our chief executive. I spend about 50% of my time travelling to visit the team members and have to influence their line managers to allow them the time to focus on my area of the business."

Equally important though is the role of building individual relationships with each member of the team in order to build trust and reduce conflict.

"The trust I have built with my team means that they are prepared to let me intervene when it is necessary to resolve issues."

"I work hard at the beginning to find out what motivates people and then tailor my approach accordingly."

The tensions outlined above are not alternatives or choices. They are essential elements for success in complex teams. Yet for many team leaders this is creating excessive pressures on both their work and personal lives. Hence Hallowell¹⁷ found that such increasing complexity in their job roles is leading to under performance and poor decision making amongst many managers.

5. Meeting the Challenges: How teams and leaders are responding.

The experience for many people working in a complex team environment is that the new environment was thrust upon them by restructuring, change and business necessity, without the time or opportunity to reappraise how to work effectively together. Team leaders can no longer operate in traditional ways. Being responsible for all decisions, available all hours and being the central focus for all information is no longer feasible.

5.1 Sharing responsibility.

Many team leaders we interviewed recognised the need to let go and change their role:

"It took me 14 months to be solo and miss a few meetings. The process of letting go was a gradual one."

"It doesn't work if you want to be in charge. I acknowledge that I can't control. I can disrupt and nudge things along in the right direction, but I can't control."

Yet for this to happen, the team also has to move on and recognise that they share the responsibility for the overall success.

"It's important to know that you can rely on your team- no one person can do it. I know the strengths in the team and the matrix of capabilities and I can rely on the interdependencies between the different teams which are so important".

During our interviews we met team leaders who were still operating in traditional ways and struggling with the pressures of being expected to know everything and take total responsibility for all issues. We also met team leaders who recognised the need to change their approach, but were finding it difficult because their teams still wanted the security of the more traditional approach. In addition we met teams and team leaders who had worked together to create an environment where they recognised and embraced the true meaning of shared leadership. This was where many of the teams which were achieving higher performance outcomes were operating. These three team states are represented in Figure 2.



Figure 2: Operating states of complex teams as they move towards shared responsibility.

Shared responsibility doesn't just happen. It takes time and effort both for the team leader to adapt their style and for the team members to develop in terms of their maturity as a team.

Yet often time is the one thing that isn't available. Recognising the need to develop a more

¹⁷ Hallowell, E. M. (2005) Why Smart People Underperform. *Harvard Business Review*. January.

flexible leadership style and working with the team to agree the expectations and parameters of their role is essential. From the quotes and examples above, we can see that many of the team leaders have had to learn to let go and in some cases they see themselves very much as part of the team, sharing responsibility and adapting to the challenges presented by the business environment.

5.2 Developing leadership style with complexity.

The leadership style of the team leader needs to develop in relationship to the levels of complexity the team is working in and their overall maturity as a team.

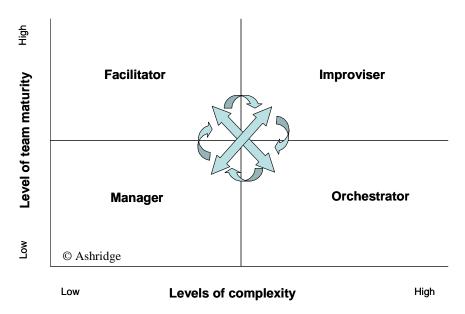


Figure 3: Leadership style and complexity.

The "manager style" represents the more traditional leadership approach, that of directing, monitoring, delegating and managing overall performance, which may still be appropriate for a traditional team in a stable environment. Agreeing clear ground rules and identifying the important processes, standard of excellence and the non-negotiables of being in the team are important. However this role is not sustainable long-term as the team needs to develop the

skills and capabilities of taking on a more shared leadership approach. Complex situations, where there is no clear solution and where team members need to act independently, require a different approach and leaders need to start to learn to let go.

As the complexity increases the role of **orchestrator** is more appropriate. Just like the conductor of an orchestra or band, the leader can set the tempo and quality standards, interpret how the music should be played and help the players achieve the vision together.

Whilst it is still a directive role it involves coaching and working with the talents of the team – it's more about doing it together.

One leader we interviewed recognised this as his style in dealing with his team. Rather than manage the interface with all the clients the team worked with, he saw his role as an orchestrator, setting up the relationships, responsibilities and ways of working, so that the team could manage the customer relationships. This enabled him to take a broader role and lead the overall context rather than the everyday detail. This required setting the standards and building the skills of the team so that they could develop the ability to take on the new responsibilities this required.

The quotes below are other examples of managers working as orchestrators to ensure that their teams perform to their potential.

"I make sure people have the information and are aware of the processes they need to follow, but let them get on with it."

"It's important to respect that other people can do things a lot better than me – there is no point in micro managing. All I can do is make sure that everything around them works well."

"Most of the team are self-motivated; most are here because they believe in what they are doing and some feel quite passionately about what we're trying to do - It sometimes helps to

allocate leadership of different parts of the project to individual team members, as this gives them recognition among the rest of the team."

As the team becomes more experienced both the team leader and the team members can move into the top right hand corner – that of the **improviser**. This is the phase of shared responsibility. Team members recognise their interdependence and develop the respect and trust to work together.

To improvise effectively requires skill and experience. It also requires understanding the other members of team and learning to adhere to a few basic rules – after all a jazz band will always know what key to improvise in and what notes and patterns will or will not work! They will also understand each others' style and approach, listening and responding to the overall theme. This is where skills in joint problem solving, shared approaches and skills in managing conflict constructively become very important.

"With increasing complexity you have to let yourself be upwardly managed by others – You can't have an ego – it's about being led to the right place."

"It's important to maintain a collective sense of responsibility for making it work rather than it all sitting on my shoulders."

Helping the team to move to the top right hand corner requires a high degree of team facilitation and coaching. Often this is the role of the team leader acting as a coach and mentor, working to ensure that team has the opportunity to build relationships and develop trust and openness in their work together. The role of **facilitator** is one which has influence and importance at all stages in the model and is essential for leaders to develop both themselves and their team to the situation where they can improvise together.

"When people are working remotely you need to trust and inspire people rather than pushing things on them."

"We take time to review the priorities as a team. I ask them who they need to connect with and what type of work we need to be doing. From this we divide the roles up between the

team so that everyone has a chance to input into the discussion and share their views – it's really important to involve people in shaping their future."

"There is a need to ask the team how they want to work and do it together."

"We want everyone to take ownership for what we are trying to achieve and the only way to do this is to involve them – We are now starting to see real benefits; the team is taking ownership for driving issues forward more."

The characteristics of the four styles are summarised in figure 4. These styles are not an either/or for team leaders. They need to become adept at moving between the styles depending on the situation they are working in and the needs of the team members. Working towards a more facilitating approach requires both the team leader and the team to reappraise and develop their approach together.

Facilitator	Improviser
Ad hoc support when necessary Facilitate reviews, learning and performance management Coaching and mentoring role Unlikely to be involved in day-to-day running of the team Creates opportunities for the team to develop and build trust	Shared leadership with the team Leader acts as coach and mentor along with team members The team uses initiative and creativity to achieve goals Vision created together High level of trust developed Interdependence develops
Manager	Orchestrator
Managing day-to-day workings of the team Establishing basic initial processes and ways of working Providing hands-on support to team members Delegating, monitoring and reviewing work	Setting up systems Accountable for setting vision, direction, common sense of purpose Agreeing ground rules, ways of working tailored to environment Establishing what's important Agreeing communication and governance processes Building skills and capabilities in the team

Figure 4: Characteristics of the 4 complex leadership styles.

6. Communication Difficulties

"Communication difficulties" were recognised as a challenge by 41% of respondents to the questionnaire. In addition "lack of time to meet as a team" was one of the top five challenges

outlined earlier in the paper. This is not surprising when we look at the make up of our overall sample group with 70% of respondents dispersed geographically, 41% across time zones and 51% working in multi cultural teams.

The focus of communication is predominantly via three forms: face-to-face, email and telephone. It was interesting that on the whole other communication channels were rarely used. Video conferencing hardly featured in the feedback, and shared electronic environments were mainly used for the purpose of learning (although those teams achieving higher performance outcomes were using this slightly more frequently than the others).

The sample generally favoured face-to-face communication with a strong preference for using it for performance reviews, problem solving, objective setting, team building and dealing with interpersonal issues.

"A lot of communication is non verbal and cannot be picked up in emails."

"I find face-to-face works best as this is when you can state a lot more and ask questions rather than have to try to put it in an e mail which doesn't get read properly."

Team leaders and team members referred to the problems associated with working across time zones and across cultures. They pointed to misunderstandings, difficulty in resolving conflict, finding time to communicate, problems in coaching others virtually, developing trust, and managing different approaches to working together.

"Getting time to meet is difficult as most of the team are senior with external responsibilities and travel frequently."

"Our team is spread from the Far East, Africa, Brazil, UK and USA means that there is little opportunity for face-to-face meetings and no shared working hours. Compromise is required for all team conferences."

"Five hour time zone difference means that there are only a few hours in the afternoon where the entire team is present. Video conferencing and remote desktop sharing proved useful but are difficult to get working all the time."

However despite these problems, those teams achieving higher performance outcomes used a greater range of communication channels and used them for different purposes. They used telephone much more frequently to conduct performance reviews, manage interpersonal issues, provide feedback and problem solve as the quotes below illustrate.

"We use email telephone and instant messaging as we are spread across the globe."

"Telephone works best for dealing with sensitive issues such as problem solving, feedback, performance review, resolving interpersonal issues. Email works best for sharing information and objectives."

Their choice of use of telephone rather than the more popular face-to-face did not impact on the scores given for leadership competence to these leaders of teams achieving higher performance outcomes. This suggests that these forms of communication can be just as effective as face-to-face meetings if the culture of the team allows it.

No surprisingly, give the above, the teams achieving higher performance outcomes meet less frequently as a team. Over half the these teams only meet together once a year, or never in a face-to-face environment!

This data together with information about the use of different communication channels illustrates that traditional face-to-face communication can be successfully replaced by other forms of communication, challenging the often held assumption that face-to-face is the "best form of communication". Given the pressure on travel budgets and the time spent travelling to different locations it will be important for team leaders to develop the confidence and ability to communicate effectively using mediums other than face-to-face communication – it

is a major shift, but one which can save time and reduce the pressure on team leaders and team members alike.

There were four key areas identified which were of importance to the leaders of the teams achieving higher performance outcomes with regard to their development of communications within the team:

- The need to identify and develop a clear communication strategy
- The ability to develop "non visual" communication skills
- The necessity to build trust across the team
- The importance of using technology to best advantage

7. Conclusions.

A number of key themes have arisen in this study which contribute to the success of the performance of a complex team. Communication is important as it is the linkage between the team members. The team leader is important with regard to their style and competence. The maturity of the team as it learns to operate as a team and move towards shared responsibility, and the reduction in conflict by developing positive relationships can be make or break for a teams success. Not all these factors are within the control of the team leader, although they can clearly impact upon them and their resolution.



Figure 5: Success factors for complex teams.

In order for a complex team to be successful and achieve high performance outcomes, it needs to resolve all four elements illustrated in figure 5. Key difficulties in any of the four areas will result in lesser performance being achieved, and more stress for all the team members and leader concerned. It is necessary for organisations to invest time and resources in ensuring that their complex teams can perform to the best of their abilities.

(6,057 words)

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