



Creating and Sustaining Virtual Teamwork Effectiveness

Final Research Report



Center for
Creative
Leadership[™]



Executive Summary

Background

Challenged by constant reliance on technology, lack of face-to-face interactions, and working across time zones, virtual teams often encounter tensions and challenges to effectiveness. This research was conducted to help virtual teams achieve greater success; not by eliminating these challenges, but by teaching members ways to leverage polarities underlying virtual teamwork. Polarities, also known as contradictions or paradoxes, are ongoing themes that appear to be in opposition to each other, but in reality, can be complementary and synergistic. It is increasingly recognized that understanding polarities in business management is paramount because organizations and the people working in them find themselves in environments that are increasingly volatile, uncertain, complex, and ambiguous (VUCA).

Through this research we explored the role of polarities in virtual teams' effectiveness. Our central research premise is that teams who understand and are able to leverage polarities will achieve and maintain greater effectiveness over time. Through this research we engaged with 140 teams globally from a wide range of industries. The research was conducted over time, with most teams completing a polarities assessment two times, six months apart. This allowed us to explore how the polarities change over time and what impact this has on virtual team's effectiveness. More details regarding the research design and teams can be found at the end of this report.

Research Findings

Positive Outcomes

- As anticipated, leveraged polarities (maximizing benefits and minimizing the downsides of both poles) are positively associated with virtual team effectiveness. What this means is that teams who were able to have sufficient focus on both poles (either naturally or through concerted focus and effort) had higher ratings of team effectiveness. Polarity management is an important leadership capability.
- The polarity **Task Focused and Relationship Focused** is positively associated with team effectiveness. In other words, team effectiveness requires individuals who focus on the tasks of the team and focus on building *relationships* to facilitate working together as a team.
- The polarity **Unified Team and Diverse Individuals** is positively associated with a number of individual level effects including: individual team members' satisfaction working on the team, individuals' trust in the team, individuals' commitment to the team, individuals' opportunities for professional growth and development, individuals' professional and work-related learning, sustainability/viability (intent to remain). In other words, team effectiveness requires individuals who can work *apart* effectively **and** bring their diverse individual perspectives together to work as a unified team.

How Other Aspects of Virtual Teams Influence and Interact with the Polarities:

- Team commitment had significant interactions with team members' geographic dispersion. The highest levels of overall teamwork polarity occurred at high levels of team commitment *and* low levels of max time differences (maximum number of time zoned between members ranged from 0 to 12 hours). Clearly, time differences are a teamwork hindrance.
- Team structural "togetherness" (i.e., hours per week spent on this team) and team attitudinal "togetherness" (i.e., team commitment) were both significantly positively related to the polarities.
- When team members are over-committed (members of multiple teams) the polarities suffer and this negatively impacts team effectiveness.
- When team members are more geographically dispersed (higher maximum time zone difference between team members), there tends to be lower levels of commitment to the team and in turn more challenges leveraging polarities.
- None of the *team composition diversity* measures (e.g., diversity of gender, age, education, team tenure, position, geographic region of origin) were significantly related to the polarities. This finding is consistent with logic underlying the team cohesion polarity, which suggests teams need BOTH diverse individuals AND a unified team to have a high functioning team – simply having a team composed of diverse individuals is insufficient.

Change Over Time

- Polarities affect teamwork and individual team members. Changes in polarities are related to changes in team effectiveness and individual team members' learning, satisfaction, and desire to remain with the team. In other words, virtual teams who actively work on polarities benefit both the team as a whole and its team members.

Training

- Overall the polarity training, which included information on the polarities concept and feedback on the team's current status on eight polarities, had less impact on changes in polarities than we had expected. It seems that awareness of the polarities was not enough to help teams improve, high levels of information sharing among team members was also required for polarities improvement. Information sharing includes team members sharing their opinions when making decisions, team members effectively sharing large amounts of important information, team members getting relevant information in a timely manner, team members not allowing a few vocal team members dominate discussions, and asking all team members to share their thoughts while discussing issues.
- The teams most effective at leveraging technology for communication and coordination so that members feel more connected and less virtual (virtual teams who are less virtual) benefited the most from polarity training.

Actions Team and Organizations Can Take:

1. Team members need support to integrate polarity management into their practice. Organizations can help teams tie action plans and efforts to leverage polarities to broader organizational outcomes (e.g., strategy, culture).
2. Provide increased education about polarity management, coupled with increased emphasis on information sharing between team members.
3. Identify polarity management champions on teams and in the organization.
4. Integrate polarity management as a teamwork leadership competency.
5. Foster a culture that supports the use of polarity management.
6. Managers should be aware of the possible positive and negative impacts of scheduling a person simultaneously in too many or few project teams on his/her performance.
7. Teams need to be supported in their team(work) processes, and to this end organizations can assign team coaches to each team and provide teams with technology that facilitates processes such as communication and coordination.
8. Assist individual employees in their time management because multiple team memberships put employees under considerable time pressure in each team context.

Conclusion

Teams of the future need to be able to thrive in a world of polarities. This research shows that the team's ability to leverage polarities positively relates to team effectiveness indicators including team performance as well as individual team members' satisfaction, trust, commitment, professional development, learning, sustainability/viability (intent to remain). Organizations should provide increased education about polarity management, coupled with increased emphasis on information sharing between team members. This is particularly important to the extent to which team members are spread out across time zones (more geographic dispersion) and use more asynchronous virtual tools (such as to email and online collaborative websites) to coordinate and execute team processes. Finally, organizations should carefully consider how many virtual teams each member works on. Team structural "togetherness" (i.e., hours per week spent on this team) and team attitudinal "togetherness" (i.e., team commitment) were key drivers of polarities.

We hope that these findings will stimulate discussions and highlight possibilities for further action.

Feedback from Study Participants

- “The polarity approach is quite an intriguing new way of looking at things. It helps you to achieve more than balance, it provides a way to achieve growth and progress.” (Leader of Team 1000)
- “Thank you for all your time, you know a few months ago... we had no idea that opposing entities, polarities, could be used to benefit teams. It has been an educational experience for me personally watching how these small things make a big difference.” (Leader of Team 1059)
- “This is good timing for this, as [team member] knows our team has changed quite a bit over the past twelve months. We’ve had different people taking on different challenges, the org structure has changed, we’ve had a lot of movement and we’re almost on a monthly basis still trying to figure out the best way to get the most out of our team... I think this [polarity thinking] gives us a lot more concrete theory.” (Leader of Team 1008)
- “On behalf of the team, I would like to express my appreciation of the time you spent with our team. I had never considered the concept of how polarities can co-exist in our business environment. We now are empowered with this knowledge.” (Leader of Team 1053)
- “On behalf of the Team, I would like to thank you and the wider CCL team for including (organization name removed) in the Virtual Team Polarity Research. As a team we have gained substantially from working with CCL, and hope to continue to develop our polarities thinking now and into the future. We look forward to reviewing the findings from your research.” (Leader of Team 1037)

The research team wants to thank every team member for their participation in this research project. We also want to thank the SHRM Foundation for their financial support of this project.



About the Research

Introduction to Polarities and the Polarity Map®

Polarities are ongoing pairs that appear to be in opposition to each other, but in truth, are complimentary and interdependent. You may be more familiar with the concept of polarities under a different name, such as paradox, conundrum, dilemma, dual tensions, and wicked problems. Whatever your preferred terminology there is an underlying phenomenon that works in predictable ways. The more we understand the elements of this phenomenon and the dynamics by which it functions, the more effective we can be at reaping the benefits of two apparently opposite poles.

Given the explosive growth in virtual teams worldwide, developing effective techniques for such teams is rapidly becoming a core business competency and a competitive advantage. One way to develop effective virtual teams is by enhancing their functioning through polarity thinking. The ability to see, frame, and reframe unsolvable situations is a critical skill for making a better future in the VUCA world of Volatility, Uncertainty, Complexity, and Ambiguity.

Barry Johnson introduced the Polarity Map® in 1975 to facilitate exploring tensions, reinforcing cycles, and the potential for leveraging paradox. The user friendly framework is distinguishable by its symbolic representation of the “why,” “what,” “and” “how” to take advantage of paradox. The polarity map as a whole raises awareness of the connection between competing interests with predictable cycles that align energy in a dynamic and diagonal flow. Simply, the graphic tool shows the upsides and downsides of interdependent pairs, warning signs of over-focusing on one of the two poles, and finally potential action steps to leverage the paradox and reach desired goals.

In short:

- Some leadership problems can be addressed with “either/or” thinking, but polarities must be addressed with “both/and” thinking.
- Polarities are interdependent pairs that need each other over time to achieve a higher purpose.
- While polarities are unavoidable and unsolvable, they are leverageable. Understanding how to leverage, how to maximize the upsides of both poles while minimizing the downsides, enables you to do more with less, with greater speed and sustainability.

Use polarity thinking and the maps to:

- Explore opportunities and advantages in tensions or contradictions rather than suppress or deny them.
- Illustrate perceptual differences and hidden views when debating topics of the contrasting value.
- Shift views that only a “few” people are responsible for managing polarities to it being a process of the group.
- Sensitize the organization to a paradoxical lens.
- Reframe your organization’s wicked problems so they become complementary and codependent (a healthier stance).
- Interpret and expose reoccurring chronic issues especially those that might be globally based.
- Look for clues in mixed messages for a source of hidden paradox.
- Escape vicious cycles. Work towards continuous improvement (virtuous cycles), moving from good to great.
- Be observant of the contexts and times when contradictions are present (e.g., the times when the organization is in profitability mode and when it is in growth mode).
- Help leaders understand how to effectively handle paradoxes (e.g., direct and coach).
- Work through resistance to change.

Eight Polarities Researched

Based on an exhaustive review of the virtual teams' literature as well as a variety of team member experiences, we have identified eight "classic" challenges that virtual teams face. Below is a brief description of each of the polarities assessed in this study.

Map Title	Poles	Polarity Description
Collaborative Learning	<i>Advocacy – Inquiry</i>	Team members will advocate for ideas and decisions that they believe are best. At the same time, team members will genuinely inquire about and be open to alternative viewpoints.
Communication	<i>Formal Communication – Informal Communication</i>	Team members must utilize formal communication to align member efforts and share information. At the same time, informal communication provides quick responses and fosters teamwork.
Dependability	<i>Verify – Trust</i>	Team members must verify work quality. At the same time, they will trust one another to be effective team members.
Geographic Dispersion	<i>Physically Apart – Physically Together</i>	Team members work towards common goals while geographically dispersed. At the same time, they need face-to-face time to bond as a team and accomplish complex tasks.
Managed Work Schedules	<i>Flexible Schedule – Traditional Schedule</i>	Team members will need to be available to work outside hours of the traditional business day. At the same time, team members need to respect each other's need to maintain their usual schedule.
Team Cohesiveness	<i>Unified Team – Diverse Individuals</i>	Team members need to act as a unified team. At the same time, they should maintain and make use of their distinct perspectives and identities.
Team Effectiveness	<i>Task Focused – Relationship Oriented</i>	Team members focus on task work. At the same time, they must also focus on building relationships to facilitate working together as a team.
Work Processes	<i>Create New Processes – Use Existing Processes</i>	Team members invent new processes for working together more productively. At the same time, they must make use of proven processes and be mindful of their ability to interface effectively with the broader organization.

Research Design

This study employed a multi-treatment pretest-posttest quasi-experimental research design to explore the role of managed polarities in virtual teams' effectiveness. The original design included 120 teams in total, 30 in each of 4 groups (1 control, 3 treatment). All three treatment groups completed the pre-survey assessment; they differ in terms of the treatment received. After completing the pre-survey assessment the first treatment group received a feedback session. The feedback session consisted of a team debrief of aggregated item and scale level scores for each polarity, an overview (based on composite score) of how well the team has been managing the polarities to date, and a discussion of how the team achieved the current results. The second treatment group received the feedback session and in addition received a standardized action planning session. The researchers worked with these teams to develop action plans for managing the polarities including identification of action steps the teams can take to leverage the upsides of the polarities, identification of "early warnings" or measurable indicators a team is getting into the downsides of the polarities, and instructions for using a log for the six months of the implementation period based on the action steps and early warnings. The third treatment group received the feedback session, standardized action planning session, and a follow up session. The follow up session included a progress check-in conducted at the mid-point. Approximately six months after the initial assessment, each virtual team (treatment and control) is assessed again on the eight polarities and asked to complete a measure of team effectiveness.

Surveys were administered to all team members and the team leaders. Measures of team performance and task interdependence were collected from the team leaders, all other variables were collected from the team members and aggregated to the team-level.

Who Participated

One hundred and forty-one teams were recruited from 56 for-profit, non-profit, and government organizations from a wide variety of industries (e.g., manufacturing, education, technology, food/beverage, healthcare, philanthropy/humanitarian aid) and geographic regions (e.g., Africa, Eastern Europe, Western Europe, South America, North America). Forty-five teams withdrew after T1 surveys were completed or were non-responsive.

Two-wave data were collected approximately 6-months apart. Time 1 (T1) yielded responses from 141 teams and 831 team members. The T1 data collection also generated survey responses from 68 team leaders and 99 team supervisors. Time 2 (T2) yielded responses from 96 teams and 432 team members. The T2 data collection also generated survey responses from 46 team leaders and 25 team supervisors.

Modeling the dynamics between the team polarities and team effectiveness, at both the team and individual levels, required surveys responses from two+ members per team at both T1 and T2 and an external rating of team performance (e.g., from a team supervisor). The final sample consisted of 55 teams and 221 members. These teams were from 32 different organizations, which included for-profit, non-profit, and government organizations from a wide variety of industries (e.g., manufacturing, education, technology, healthcare, philanthropy/humanitarian aid) and geographic regions. The majority of team members included were originally from the North American region (45.2%), Western Europe (20.4%), Latin America (10.4%), Asia Pacific (12.7%), South Asia (7.7%), with remaining few members being from the Middle East, Eastern Europe, Africa, and Oceania. The sample average age was 41.19 (SD = 10.12) with an average team tenure of 2.99 years (SD = 2.92). 43% of the sample was male and 57% female. The sample was generally well-educated with 14.5% having doctoral level degrees, 37.1% master's level degrees, 34.4% bachelor's degrees, 6.3% with some college, and only 7.7% with only a high-school diploma or equivalent.

Key Terms and Measures

Members of Multiple Teams – average number of teams that team members are currently on.

Team Effectiveness – a measure of overall team performance, team viability (intent to stay) and team satisfaction.

Virtual Teams – groups of geographically, organizationally, and/or time dispersed, mutually dependent workers brought together through technologies to work on the same objectives.

Virtuality – the extent to which team members use virtual tools to coordinate and execute team processes. Includes % of time working face to face, utilizing video conferencing, phone, email, text, shareware/knowledge tools. For example, if a team primarily uses asynchronous technology of low informational value (e.g., email), the team has a relatively high level of virtuality. Conversely, if team members meet face to face more frequently and often use information-rich, synchronous technology (e.g., video conferencing), the team has a relatively lower level of virtuality.

Research Partners

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Resources

Polarity management: Identifying and managing unsolvable problems.

Barry Johnson, 1992.

Polarity Partnerships.

<http://www.polaritypartnerships.com>

Managing paradox blending East and West philosophies to unlock its advantages and opportunities.

<http://www.ccl.org>

Virtuality. The dimensions and antecedents of team virtuality.

<http://psycnet.apa.org/psycinfo/2005-11387-004>



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About the Center for Creative Leadership

The Center for Creative Leadership (CCL[®]) is a top-ranked, global provider of leadership development. By leveraging the power of leadership to drive results that matter most to clients, CCL transforms individual leaders, teams, organizations and society. Our array of cutting-edge solutions is steeped in extensive research and experience gained from working with hundreds of thousands of leaders at all levels. Ranked among the world's Top 5 providers of executive education by *Financial Times* and in the Top 10 by *Bloomberg BusinessWeek*, CCL has offices in Greensboro, NC; Colorado Springs, CO; San Diego, CA; Brussels, Belgium; Moscow, Russia; Addis Ababa, Ethiopia; Johannesburg, South Africa; Singapore; Gurgaon, India; and Shanghai, China.





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