

AMPLIFYING PERFORMANCE IN VIRTUAL TEAMS OPTIMIZING COMMUNICATION STRATEGIES

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ABSTRACT:

INTERNATIONAL COMPANIES, IN RESPONSE TO A HIGH EXPECTATION OF GAINS AND EFFICIENCY, HAVE STARTED IMPLEMENTING VIRTUAL TEAMS TO COMBAT GEOGRAPHICALLY SCATTERED RESOURCES. THESE STRATEGIES HAVE OFFERED SIGNIFICANT SAVINGS AND INCREASED PRODUCTIVITY AS WELL AS MANY ADVANTAGES AND OPPORTUNITIES FOR EMPLOYEES. ALTHOUGH TECHNOLOGY HAS BEEN THE MAIN ENABLER IN THE VIRTUALIZATION OF TEAMS BY OFFERING MANY DIVERSE FORMS OF COMMUNICATION WHICH VARY FROM TELEPHONY SERVICES, EMAIL, TELECONFERENCING, ELECTRONIC WHITEBOARDS, COLLABORATIVE SOFTWARE, GROUP CHATS TO CLOUD/INTRANET DATA SHARING, IT IS ALSO ONE OF THE DEFINING DIFFERENCES WHICH HAS TO BE TACKLED WHEN CREATING A STRATEGY FOR LEADERSHIP. RESEARCH SUGGESTS THAT FACE TO FACE AND ON-SITE MEETINGS, VIRTUAL ROUND TABLES AND ELECTRONIC YEARBOOKS SHOULD BE TAKEN INTO ACCOUNT TO ENCOURAGE COMMUNICATION AS NOT ALL CHANNELS ARE AS EFFICIENT IN SENDING NONVERBAL CUES. THE PURPOSE OF OUR PAPER IS TO DISCOVER THE EXTENT OF PREVIOUS RESEARCH REGARDING COMMUNICATION IN A VIRTUAL TEAM AS WELL AS GAIN INSIGHT INTO THE RELATIONSHIP BETWEEN DIFFERENT FORMS OF DIGITAL COMMUNICATION AND HOW THEY IMPACT PERFORMANCE.

KEY WORDS: VIRTUAL TEAMS, COMMUNICATION, LEADERSHIP STRATEGIES, TEAM PERFORMANCE

1. INTRODUCTION

Efficient teams have become vital for performance in the management of the fight against the growing complexity and uncertainty of today's business which led to a restructure of organizations and the birth of international teams whose members are scattered across geographic locations. Virtual operations have offered significant savings and increased productivity to companies as well as better working conditions, terms of recruitment and an increased balance of professional/personal lives to employees. Rapid development of technology has enabled virtual teams and organizations to become more prevalent. Even so, not even the best of IT&C has saved

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companies from the occasional rough patches due to the specifics of the virtual way of operation: problems regarding trust and a sense of belonging due to impersonal forms of communication or leadership that does not take into account the particulars of the virtual environment.^{2 3 4 5 6}

An efficient team fosters healthy relationships which can only be mediated by strong communication. The most efficient teams are those that have members which combine their talents, individual experiences and abilities by means of meaningful processes and work relationships. Communication can become problematic even in a traditional team where meetings are held in person. The problems persist and are exacerbated when linguistic, temporal and cultural variables are introduced by the nature of virtual teams.

Even though research in virtual teams has increased in recent years and studies in communication are prevalent, these vectors haven't been synergized enough in a way that can contribute to a working model. Although team communication is often defined and described in different ways it has still been integrated into studies of virtual team efficiency. This has led to a less relevant understanding of the dynamics of this issue and its relationship to team efficiency. The connection between the level of communication and performance of teams, be they virtual or traditional, has been proven but less research has been done on how the different ways of communication available compare and contribute to overall team goal achievement, trust, comprehension or effectiveness.^{7 8}

The purpose of this paper is to discover the extent of previous research regarding communication in a virtual team environment, how it compares to the findings of our research as well as gain insight into the relationship between different types of communication and efficiency. Furthermore, we aim to find what future recommendations can be made on the topic. We decided to focus our attention on how different communication channels impact performance in a virtual team as to create a guideline upon which communication strategies can be made as well as guide the focus of leadership.

2. VIRTUAL TEAMS

Below we'll firstly try to broadly define virtual teams and their inherent advantages and disadvantages after which we'll tackle a general definition of communication with a focus on its verbal and nonverbal components. We'll continue by taking a look at how communication is used

² Alpaender, Guvenc G., and Carroll R. Lee. "Culture, strategy and teamwork: the keys to organizational change." *Journal of Management Development* 14, no. 8 (1995): 4-18.

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⁴ MacGregor, Steven P. "Working Virtually: Challenges of Virtual Teams by Robert Jones, Robert Oyung, and Lisa Pace." *Journal of Product Innovation Management* 24, no. 1 (2007): 95-97.

⁵ Katzenbach, Jon R., and Douglas K. Smith. *The wisdom of teams: Creating the high-performance organization*. Harvard Business Review Press, 2015.

⁶ Powell, Anne, Gabriele Piccoli, and Blake Ives. "Virtual teams: a review of current literature and directions for future research." *ACM SIGMIS Database: the DATABASE for Advances in Information Systems* 35, no. 1 (2004): 6-36.

⁷ Cooke, Nancy J., Preston A. Kiekel, Eduardo Salas, Renée Stout, Clint Bowers, and Janis Cannon-Bowers. "Measuring team knowledge: A window to the cognitive underpinnings of team performance." *Group Dynamics: Theory, Research, and Practice* 7, no. 3 (2003): 179.

⁸ Mesmer-Magnus, Jessica R., and Leslie A. DeChurch. "Information sharing and team performance: A meta-analysis." *Journal of Applied Psychology* 94, no. 2 (2009): 535.

in virtual teams and carry on with our case study. Our conclusions and limitations we'll end the paper.

2.1 Defining Virtual Teams

Virtual teams are the group of individuals united by a common goal but spread geographically, culturally, linguistically or, ethnically. As defined by Powell, Piccoli and Ives, virtual teams are described 'as groups of geographically, organizationally and/or time dispersed workers brought together by information and telecommunication technologies to accomplish one or more organizational tasks.'⁹ Virtual teams mainly meet the demand for flexibility and agility in the delivery of services or products in a marketplace with increased competition and a decentralized and globalized work processes. The need for talent and competency has lead organizations to look to structures which leverage available talent across boundaries. More and more organizations are adopting the virtual team approach to reduce their operating costs, encourage knowledge sharing among their employees, promote organizational learning and expand their business hours to 24/7 by utilizing the different time zones of virtual team members.¹⁰ Human relationships draw their power from the proximity of the individuals but due to the fact that virtual team members have limited personal interaction this creates a myriad of issues. For a virtual team to be productive it is important to overcome the cultural differences, communication barriers, power struggles and conflict to build trust, collaboration and commitment among the individuals. By using the right strategies, tools and processes, organizations can benefit greatly from this new-age trend of virtual teams.^{11 12}

2.2 Advantages and Disadvantages of Virtual Teams

Regarding the advantages and disadvantages of virtual teams we can contextualize them from three perspectives, individual, organizational and societal. Below we will summarize the attribute, positive and negative, of virtual teams so that a clear pathway to identifying constructive solutions can be uncovered.

ADVANTAGES:

Cost savings - Organizations can optimize real estate costs by using virtual teams as well as utility or travel expenses. Most outsource operations in low-cost regions to also take advantage of lower wages of the employees.

Global Talent - By leveraging human capital from around the world, organizations can bring in the fold greater understanding of local markets as well as benefit from specialist and experts that increase innovation and knowledge sharing.

⁹ Powell, Anne, Gabriele Piccoli, and Blake Ives. "Virtual teams: a review of current literature and directions for future research." ACM SIGMIS Database: the DATABASE for Advances in Information Systems 35, no. 1 (2004): 6-36.

¹⁰ Prachi Juneja "Virtual Team - Management Study Guide." managementstudyguide.com, from <http://www.managementstudyguide.com/virtual-team.htm> retrieved September 3rd, 2018

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¹² Savu, Ionut, Cicerone Laurentiu Popa, and Costel Emil Cotet. "MITIGATING FRICTION IN MULTICULTURAL VIRTUAL ORGANIZATIONS/TEAMS." Annals of DAAAM & Proceedings 28

Increased Productivity - As opposed to local teams, virtual teams tend to have a greater focus on the objectives dealt with as they benefit from a flatter structure of organization. This translates into increased productivity and greater profits for the company.

Decreased Time to Market - Virtual teams can leverage the different time zones that the members span and run the project continuously 24/7. This greatly speeds up development as well as response time.

New Opportunities - Any tasks that do not require physical presence are now obtainable by candidates that formerly were restricted by availability thus opening the doors to new potential talent.

DISADVANTAGES:

Cost of Technology - One of the main costs in running virtual teams comes from the necessary technology required to run them. Without the use of multiple communication technologies it is either impossible or impractical to run such teams.

Conflicts, Lack of Trust & Collaboration - One of the main reasons for conflict in virtual teams is the cultural divide as well as the different styles of communication which give rise to mistrust and difficulties in collaboration that are intrinsic to their success. Other challenges come from the lack of direct interaction as most communication is done through non-verbal interactions.

Social Isolation - Although collaboration in the virtual space has many advantages, on a personal level, the lack of direct contact with coworkers may lead to an adverse effect on the psychological welfare of team members and consequently on productivity.¹³

As we can see, two of the disadvantages of virtual teams stem from improper communication or are a direct result of it which lead to friction and loss of efficiency in the organization or team.

3. COMMUNICATION

Going forward we'll take a broad look at how communication is defined, the importance of verbal vs nonverbal communication and how it applies to teamwork.

3.1 Defining Communication

"Communication" means any transmission of information, ideas and emotions from a social entity (person, group, community) to another via messages.

Communication can be:

Verbal - Information is transmitted through articulated language (written or oral);

Nonverbal - Information is conveyed through facial expressions, posture, tone, etc.¹⁴

Verbal communication concerns only words, verbalization, symbolic language, and not the voice that speaks them or the tone, the modulation and the rhythm of the speech. Verbal communication is a component of a oral communication. Written communication is also a verbal communication, because everything is based on the language of words, only that the oral

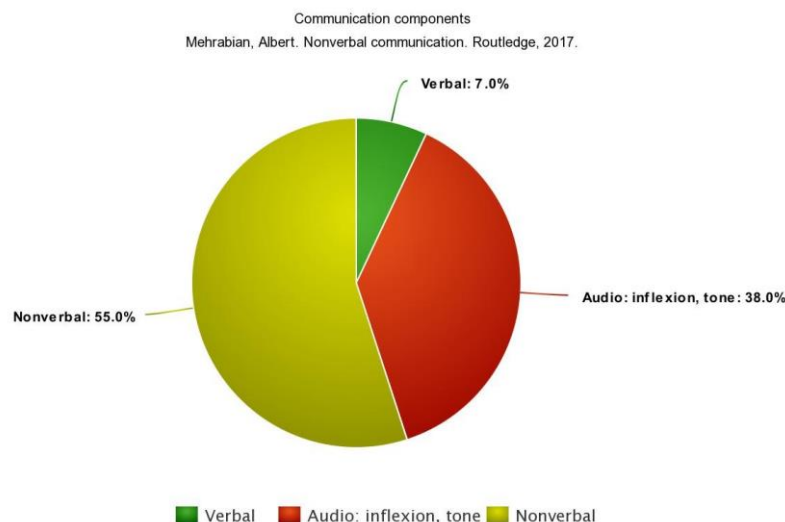
¹³ Prachi Juneja "Virtual Team - Management Study Guide." managementstudyguide.com, Advantages and Disadvantages of Virtual Teams, from <http://www.managementstudyguide.com/virtual-teams-advantages-and-disadvantages.htm>

¹⁴ Chelcea, Septimiu, Loredana Ivan, and Adina Chelcea. Comunicarea nonverbală: gesturile și postura: cuvintele nu sunt de-ajuns. Comunicare. ro, 2005.

expression is replaced by the graphic expression of the written word. Thus, verbal communication is transmitted by speaking and deciphering the symbolic meaning of words.¹⁵

Nonverbal communication involves the sum of stimuli (except verbal) present in the context of a communication situations, generated by the individuals and containing a potential message. The definition includes the intentional and unintentional component as part of the process of communication. As one speaks, one reveals a huge amount of information about oneself, but not only by words (verbal communication) but also by voice (paraverbal language) and by body language, gestures, mimic etc. (nonverbal communication). This also requires a definition of the paraverbal language concept. The paraverbal language is what is communicated by voice (volume, intonation, rhythm, accent, breaks, etc.) and by nonverbal vocal expressions: tone of the voice, laughter, coughing, shouting, sighing, screaming and so on.

Also in a conversation 45% are the verbal and audio components, while nonverbal communication occupies 55%. Most research gives similar percentages to verbal communication at a maximum of 10% in message communication. There are a multitude of similarities and differences between verbal and nonverbal communication, which we will outline below.¹⁶



3.2 Verbal vs Nonverbal Communication

Consciously or unconsciously, intentionally or unintentionally, we send and receive nonverbal messages, we make judgments and make decisions. This observation is all the more relevant as in 90% of cases, the impression of the interlocutor is formed on the basis of nonverbal information in the first 10 seconds of a meeting, so that the first messages, mostly nonverbal, affect and determine subsequent perception.¹⁷

We can summarize the similarities as being:

¹⁵ Prutianu, Ștefan. Manual de comunicare și negociere în afaceri: Comunicarea. Polirom, 2000.

¹⁶ CHIRU, Irena. Comunicare interpersonală. Irena Chiru. ed. a 2-a: București: Tritonic, 2009. 192 p.; 20 cm.(Comunicare. Media). Vol. 316. ISBN 978-973-733-357-5. II 38610.

¹⁷ CHIRU, Irena. Comunicare interpersonală. Irena Chiru. ed. a 2-a: București: Tritonic, 2009. 192 p.; 20 cm.(Comunicare. Media). Vol. 316. ISBN 978-973-733-357-5. II 38610.

Both verbal and nonverbal communication can be modeled in the following terms: transmitter-message-receiver, communication channel, effect, feedback and context of the act of communication;

Both types of communication are produced by individuals and are subjective messages;

Mostly, the meanings attached to verbal and nonverbal cues are similar;

Both verbal and nonverbal communication is based on a set of symbols culturally accepted;

The differences though are what we are interested in as they can give us insight into performance applied in practice:

Verbal communication makes use of language as a form of human specific relationship; nonverbal communication makes use of facial expressions, posture, body language in a more or less conscious manner;

Verbal communication uses oral language, written language while nonverbal communication is represented by the tone of the voice, the breaks in speech, the vocal characteristics, gestures, movements, physical presence, facial expressions etc .;

Verbal communication is voluntary, while nonverbal is involuntary, in most cases;

Nonverbal language is taught before the verbal (innate, imitation, etc.) and is also practiced on a much broader scale than verbal communication;

Nonverbal communication is generated by biological factors, and therefore more difficult to control (in connection with the involuntary nature of this type of communication);

Nonverbal communication is continuous; while verbal communication is composed of segmented units: any sentence has a distinct start and end;

4. COMMUNICATION IN THE VIRTUAL ENVIRONMENT

The exchange of information in and out of organizational boundaries is one of the most important functions of teams. The constant exchange of knowledge necessitates daily face to face meetings, common norms, trust and a strong social bond. In the case of virtual teams this is also valid but mediated by technology with little to no personal interaction.¹⁸ Today the technology used in virtual teams varies from telephony services, email, teleconferencing, electronic whiteboards, collaborative software, group chats and cloud/intranet data sharing. It is also suggested that face to face and on-site meetings, virtual round tables and electronic yearbooks should be taken into account to encourage communication.^{19 20}

These types of technology also allow asynchronous communication for team members that are location or temporally dispersed. Although CMAC (computer-mediated asynchronous

communication) systems are an improvement for agents that can choose their own time to contribute to the conversation, they lack the nonverbal component of communication, facial cues, body language, tone, etc. This inherently leads to a slower process of creating relationships and

¹⁸ Kauppila, Olli-Pekka, Risto Rajala, and Annukka Jyrämä. "Knowledge sharing through virtual teams across borders and boundaries." *Management Learning* 42, no. 4 (2011): 395-418.

¹⁹ Kostner, Jaclyn. *Virtual leadership: Secrets from the round table for the multi-site manager*. Grand Central Publishing, 2010.

²⁰ Fisher, Kimball, and Mareen Fisher. *The distance manager: A hands on guide to managing off-site employees and virtual teams*. McGraw-Hill Professional, 2000.

trust among team members.²¹ Some types of communication have been shown to be more personal, have better clarity and leave a definite impression on the parties engaged whereas others are more suited for creative work.²² As a general rule Nemiro suggests that “communication tools high in social presence and information richness” should be used “to transmit complex, non-routine and ambiguous messages”.

5. TRUST

Trust is the willingness to increase one’s vulnerability towards another person whose behaviour one cannot control in a situation where the potential gain is lower than the possible loss in case the other person abuses one’s vulnerabilities.²³ Trust plays a major role in the performance of any team, when team members are able to trust each other they will complete their tasks more efficiently and with less friction. Trust building is difficult enough in traditional team, the same endeavour is even more of a challenge when visual elements of trust are missing in the case of geographically dispersed teams. Interactions in the virtual environment gives many advantages like bringing together talent from around the world but the main disadvantage is the way team members communicate, they cannot meet face to face which induces a feeling of isolation and destroys trust.

6. CASE STUDY

The case study consists of interviews with seven people managers and two information managers of virtual teams from three BPOs (business process outsourcing), one international telecommunications company and one database technology and software company as well as a questionnaire for 14 team members, two from each of the managers. All the managers had at least 5 years of team lead experience and the team members a minimum of 4 years. Since the nature of their work and their respective employment contracts have non disclosure agreement clauses their names and those of their companies of employment have been anonymized. We decided to interview the managers as opposed to the questionnaire as it could allow a more open ended discussion regarding the qualitative aspects of the study.

For the purpose of this research we constructed an interview (for the managers) that consisted of open ended questions which gave the respondents the opportunity to be more flexible in their answers and go into more detail. We have also used closed ended questions for performance related parameters. For the team members we developed a questionnaire based on the same format as the interview but disregarding empirical performance related questions(as they did not have direct access to that information).

The aim of the case study was to test two hypotheses:

1. How influential is communication in regard to virtual team performance.
2. Is team performance affected by the channel of communication used.

In the first part of the study we tried to identify the main barriers that impede performance in a team that is geographically dispersed. The answers had a great degree of convergence especially among the managers. We can summarize the answers as follows:

- Comprehension issues/Language barriers

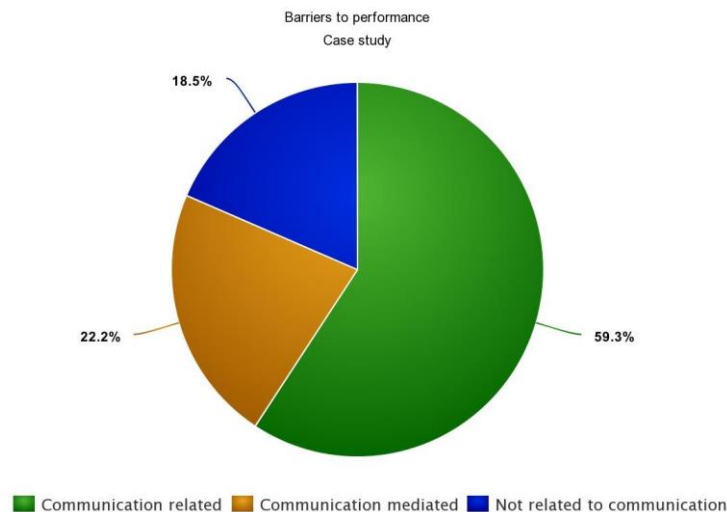
²¹ Berry, Gregory R. "Enhancing effectiveness on virtual teams: Understanding why traditional team skills are insufficient." *The Journal of Business Communication* (1973) 48, no. 2 (2011): 186-206.

²² Nemiro, Jill *Creativity in virtual teams: Key components for success* Vol.6. John Wiley & Sons, 2004.

²³ Gignac, Francine. *Building successful virtual teams*. Artech House, 2004.

- Lack of trust
- Lack of follow-up and follow-through
- Information dilution in long threaded asynchronous written communication
- Lack of team atmosphere

The questionnaire answers and interview discussions related to these issues revealed that performance was being impacted by not adapting communication needs to the most suited form of technologically mediated transfer of information. Furthermore most managers agreed that fostering a sense of team belonging was crucial to team efficiency.



Going forward we asked the managers if they tried to attenuate these problems once they had identified them and what effect did it have on the performance of the team. Efficiency and performance after procedural reform was a closed ended question and it was measured year over year on the basis of: median time to task completion and project deadline adherence. Fortunately, all of the managers had been tracking these variables as part of their business process.

All parties in the study agreed that, as much as logistically possible, the team needs to have at least one onsite meeting to “put a face to the name” of their teammates and to get to know one another on a more personal level. Of the nine managers interviewed, seven of them used either an onsite meeting or a virtual town hall at the beginning of each year or at the formation of a new team as a rule throughout their respective organizations.



Common Reforms with Positive Impact on Performance



Meetings

Periodic onsite meetings or a virtual town halls



Conflict resolution

Prioritizing synchronous communication channels with nonverbal components in conflict resolution



Visual aids

Telepresence used in knowledge transfer to aid presentation with visual cues



Team building

To improve trust and relationships, regular team building exercises are being used

The other two (although the companies did not require them to) implemented similar measures to foster team belonging. Other changes that had been applied include prioritizing calls in conflict resolution as opposed to written communication; if knowledge transfer is required all the parties now use telepresence technology to aid the presentation with visual cues and two of the teams periodically have virtual team building exercises. In all cases, performance of the teams increased year over year after these measures were implemented.

Being separated from your coworkers can lead to a feeling of isolation and at times neglect, revealed the questionnaire. When managers were asked how they deal with the issue they suggested that regular contact, especially via phone is important and if possible they organize face to face or virtual face to face (teleconference) meetings in order to keep the team close to each other. Furthermore it was indicated that communication outside business issues was a good way to develop fruitful relationships. One of the managers even used the World Cup matches as a way to bring the team closer together, he used a combination of streaming technology, telepresence and virtual presentation software to make a team building event.

As stated above we found that language barriers pose an issue and can create misunderstandings in the team. Culture dictates our biases and perceptions and this is still evident even when communication is done via a common language, even so these issues can be moderated if the parties involved are aware of them and the leadership works around them by tailoring communication strategies that take advantage of technologies that can transmit nonverbal signals. Some of the respondents quoted long email threads as a hindrance on their productivity. The asynchronous nature of the technology, in some cases, developed a minor misunderstanding or request for clarification into unnecessarily long conversations. Managers tackled these kinds of problems by limiting the use of email to factual information exchange and incorporating audio and visual communication into the workflow. Four of the nine managers interviewed organize weekly group calls or video calls where problems are discussed. These meetings allow the use of nonverbal

cues which alleviate misunderstandings, builds trust and interacts team members in a more direct way.

7. CONCLUSION

Although the small number of respondents limits any hard conclusions, our study provided some insight into the inner workings and strategies used by virtual teams to ease the issues that come out of the particularities of virtuality. Managers and team leads can incorporate these findings into their team's workflow, for example, by taking into account the strengths and weaknesses of each communication channel and tailoring their communication strategies in accordance. Although management is similar in virtual and onsite teams, leaders might need to consider that technology mediated communication does not convey meaning on all levels at the same time and should suitably alter their approaches.

The study was conducted in Bucharest, Romania and all respondents were romanian but worked in multicultural virtual teams. Although our main focus was communication in a virtual team the cultural makeup of our respondents should be taken into account as it might skew the results to one perspective. Future research should incorporate cultural differences into the proposed guidelines for virtual team communication management.

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