

Communication in the Workplace:  
Managers' Perception on Productivity of Virtual Team compared to F2F Teams

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A Thesis

Presented to the Faculty in Communication and Leadership Studies  
School of Professional Studies  
Gonzaga University

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Under the Supervision of Professor Heather Crandall

Under the Mentorship of Carolyn Cunningham

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In Partial Fulfillment

Of the Requirement for the Degree

Masters of Arts in Communication and Leadership Studies

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By

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December 2011

We the undersigned, certify that we read this thesis and approve it as adequate in scope and quality for the degree Master of Arts.



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### Abstract

Productivity, although seemingly simple of a concept actually have deep organizational communication ties which influence the way a company's culture is formed and altered. As virtual working arrangements become ever popular, this thesis aims at discovering how productive managers of employees both in a traditional Face to Face interaction compare to virtual employees who spend at least 50% of their communication reliant upon Computer Mediated Communication methods in order to achieve organizational results. A 10 question survey was given to 70 managers in a Fortune 50 company resulting in 30 total useable data surveys to compare with each other. It was concluded that communication differences between F2F and virtual work arrangements contribute to the varying perception of managers. The result supports the communication theory as presented by Pacanowsky because changes in the way people work such as virtual work, changes the company culture. Even though the results were not conclusive on the subjectivity of productivity, it was discovered that managers hold a key piece in molding organizational culture to fit the needs of virtual workers in order to be successful.

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“Working in today’s business world is like working in a world where the sun never sets”

(Admed et al, 2009, p. 2656)

## **Chapter 1: Introduction**

### **Problem/Goal**

In today’s competitive economic market, companies big and small are finding ways to cut the traditionally largest overhead cost to the organization: its people. Not by the way of laying people off as the work still needs to be done, but instead allowing virtual teams to decrease time of travel, amount of office space, and increase performance and employee satisfaction (Admed et al, 2009). At the same time there are still “significant gaps that still exist in our understanding of virtual teams” in evaluating their true work product effectiveness (Burke, et al, 2010, p. 3). There have been numerous studies on how a virtual work arrangement impacts an employee’s world, but there has been a gap in the study of virtual productivity from a leader’s perspective. Leaders are selected by the company to drive company goals and make sure their subordinates are productive in achieving results. If leaders do not see their virtual employees as productive then at the end of the day, work is not getting done to the expectations of the leader.

### **Definitions of Terms**

Managers included in this survey are first-line managers in the company. The term first-line manager is a well-recognized term in this company and refers to leaders who manage analysts only and not other leaders. The definition of a virtual worker in this study is defined as someone who is in an environment separated by other team members/managers for more than 50% of the time thus needing to rely on technology to accomplish organizational tasks. There are various definitions and levels of virtual workers but by having a consistent definition for our study allows all participants to have the same understanding. Within this survey results when describing F2F manager results compared to virtual manager results, the term “virtual manager” is used to denote managers who lead virtual workers. They themselves may not be a virtual employee so it is clear to make this distinction. This survey focuses on

one company's managers thereby allowing the company's culture to be a factor in the way productivity is seen.

Not only are employees a company's greatest asset, flexibility in work schedule can be a contributing factor to the reduction of turnover and increased employee satisfaction. According to the Society of Human Resource Management (SHRM), the average cost to hire a new employee getting paid \$8/hr is about \$3,500 per employee. Therefore, virtual work arrangements and teams may be a solution that pleases both the employee and the company, a win-win. The hope is that this thesis will discover more regarding teleworking culture whether it is truly a win for the company. This thesis measures how productive a team is from the perspective of their managers from both a virtual team and a F2F team aspect.

## **Chapter 2: REVIEW OF LITERATURE**

This review addresses the findings of researchers in various fields to discover whether virtual communication technology can truly result in an employee having greater productivity compared to those not working virtually as seen by their manager.

### **Communication Theory**

The communication dynamics of a virtual team can be a challenging one especially when Face To Face (F2F) communication has dictated much of our societal communication as we know it. This is not without reason because of the many significant body indicators as seen in body language, vocal pitch/inflection, and eye movement (Ruggieri, 2009). The culture approach to organization is a communication theory that talks about changes in corporate culture influencing how an employee brings forward ideas and how managers perceive productivity. This change in the way employees' communication with their managers actually changes the culture of communication within the organization as a whole.

By applying Geertz's concept of culture being an organizational platform such as the interaction researched in this thesis, O'Donnell-Trujillio and Pacanowsky state that organizational culture can be

seen in things such as job performance among employees. They argue that the way individuals interact within an organization may impact or play a role in the perceptions of performance not only on one particular team but could impact an entire company's culture. This interpretive communication theory can sometimes be hard to measure and needs to have a balance of facts as well as a "search for meaning" (O'Donnell-Trujillio, Pacanowsky, p. 135, 1982). Another cultural organizational change due to virtual work arrangements can be a change in the organizational communication ritual as previously established based on historical context. Rituals are sacred among cultural life even in organizations and when there is a change or disruption to this pattern, there can be much resistance. For a company whose traditional or ritual is to communicate using F2F techniques to then make an adjustment to a virtual work environment may cause added stress that may or may not lead to a decreased perception of work productivity. As technology continues to improve, organizations will need to determine whether the organizational cultural will also continue to modify. For this thesis to focus on a leadership's perspective shows how incredibly powerful a leader can be in his/her influence over the culture of their team. Managers can therefore be cultural change agents who influence their team to adapt a culture that may be different compared to corporate. When working in an untraditional work environment such as having to utilize CMC, do we need to change our working culture to fit that of the new working environment to maximize productivity?

Another communication theory to explain a cultural dissonance that may occur when employees work virtually is the critical theory of communication in organizations as presented by Deetz (1995). By being away from the corporate office setting, virtual employees may have greater creativity to think outside the box and not to be "distorted by communications within the corporation" (Deetz, 1995, p. 273). Work and corporate jargon seem to have overtaken even every day speech without realizing it. Much research has been conducted from an employee engagement point of view of greater flexibility of work, increased work/life balance, reduced turnover, and overall happier employees (Crandall & Wallace Jr., 1998). However, little research has been done specifically on how leaders of such a virtual team measure their feelings on the true productivity of managing a virtual team. With Deetz's communication theory, control as expressed by management can sometimes be even more lucrative in a company compared to

productivity or performance. With that said, do managers openly handle conflict effectively by allowing for democratic conversation with their employees about productivity or are they lured by the opportunity to gain more power and choose to “just deal with the problem” to maintain a tight ship (Deetz, 1995, p. 274)?

This thesis is of personal interest because of surveyed company’s changing organizational structure dictating a greater need for a virtual team. As this was a tremendous organizational change for the company, this study of better understanding productivity as seen by a manager will help us recognize differences between business culture when working in a F2F vs. CMC environment.

### **Theoretical Considerations**

The communication dynamics of a virtual work team can be a challenging one especially when Face To Face (FTF) communication has dictated much of our societal communication as we know it. This is not without reason because of the many significant body indicators as seen in body language, vocal pitch/inflection, and eye movement (Ruggieri, 2009). It is a good idea to take an honest look at how communication limitations may influence the productivity or quality of work conducted by a virtual employee. The cultural communication theory can help to explain why companies are moving towards a more virtual work environment where the above stated communication limitations are more likely to occur. Companies want to continuously improve and get better at what they do; therefore, changes in the organizational structure in a company may influence the company culture and effect productivity by employees from a manager perspective.

### **What is a Virtual Team?**

Employees are a company’s greatest asset and allowing flexibility in work environments can be a contributing factor to the reduction of turnover and increased employee satisfaction. In the 1990’s, many companies such as Goodyear, Motorola, Texas Instruments, and General Electric “had begun exporting the team concept to their foreign affiliates...[in order to] integrate global human resources practices” (Ahmed et al, 2009, p. 2654). DeMarie, Hendrickson, and Townsend (1998) characterize virtual teams as “groups of geographically and or/organizationally dispersed coworkers that are assembled using a

combination of telecommunications and information technologies to accomplish an organizational task” (p. 18). There are, of course, varying degrees of virtuality from working from home on occasion to take care of a sick child to the “highest degree of virtuality [in which] all members work apart from each other in distant locations and *only* communication and interact through CMC” (Berry, 2011, p. 188). In this research, the researcher defines a virtual employee as one who works at least 50% of the time away physically from any other teammates or managers.

According to the Society of Human Resource Management (SHRM), the average cost to hire a new employee getting paid \$8/hr. is about \$3,500 per employee. Considering most professional level employees start well over this hourly rate, one can only image the loss in company assets as a result of employee dissatisfaction and turnover. Therefore, virtual work arrangements and teams have the potential to be a solution that pleases both the employee and the company.

### **Productivity of Virtual Teams**

#### *Benefits*

The development of most virtual teams harness the strengths of individuals no matter where they live, therefore getting the job done with the most knowledgeable team rather than with whom ever is close by. Employees who allocate time in understanding the additional coordination that may come with working virtually will certainly benefit. This step assists in establishing meaningful work relationships leading to increased productivity while also integrating across multiple locations (Cummings, 2011).

When looking at output as produced by a virtual team, there are significant benefits intrinsically enabling the measurement of productivity such as performance. Without the stigma of corporate politics, a team can be accurately measure without preconceived notions or stigma (Berry, 2011). Performance is often easier to document and review in virtual teams because most interactions, commitments and outcomes are archived automatically and electronically (Gibson & Cohen, 2003). Accurate records recording the work conducted by the virtual team allows an objective means for a manager to revisit or review the productivity of the team.

By allowing technology to keep record of a virtual team's work product, this proves to be more accurate than the "informal evaluations done through random and time-bound observations of work processes in traditional teams" (Berry, p.200, 2011). Other examples of measuring a virtual team's productivity can include peer evaluations which may provide more concrete rather personal or non-task oriented feedback as compared to teams who have F2F communication and interaction. Another argument for the increased productivity of a virtual team is due to the selection of team members. Aasheim, Butler, and Williams (2007) argue that "telecommuters may be more productive because they receive additional training and/or are selected...because they are already the most productive employees" (p. 102). Their study expands to measure actual work productivity calls of telemarketers and found that there was sustained and increase of productively measuring 154% compared to the average agents.

### Risks

Due to larger amounts of coordination between a virtual team, a delay can occur that may lead to decreased performance and productivity especially when teams are spread across multiple continents and time zones. Research conducted by Jonathan Cummings (2001) in *Geography is Alive and Well in Virtual Teams* shows exactly how geographical circumstances can cause the greatest burdens to a virtual team and how there are tradeoffs that still exist when working in a virtual setting. In addition to geographical constraints, a lack of understanding among the communication styles of men versus women can also reduce trust and report in a virtual team thus leading to a team focused on team dynamics instead of getting the job done (Furumo & Pillis, 2007).

Other risks regarding a potential decrease in productivity is the amount of technical tools and support given to the virtual team. A company must provide virtual team members with the tools to succeed such as "email, instant messaging, conferencing, cell phones, BlackBerries, Webinars, and collaborative work tools like a Wiki" (LaBrosse, 2007, p. 87). Without these tools and resources readily available there is little chance for a virtual team to be productive. It is one thing to be able to have tools available, but it is certainly another thing to be able to provide the technical support for these tools. When

a network goes down, or a device does not work for a virtual employee then the productivity potential for the day has dramatically decreased (Grosse, 2002).

A study conducted by Bal & Gundry (1999) shows that an overwhelming number of companies considering virtual teams, showed concerns in the area of “lack of physical presence/loss in richness of interaction” (p. 4022). Out of the verbatim comments of these organizations 5 out of the 10 most common causes of difficulty were surrounding the ability to effectively communicate. Without effective communication as a foundation for a F2F or CMC team, this can have a significant effect on how responsive employees are to their leaders and how ultimately how productive they actually are.

### **Virtual Communication**

Communication is the key in getting things done in an organization whether that’s through CMC or F2F because it provides a vehicle enabling employees to make decisions, collaborate, and achieve results as established by the organization (Zbar, 2002). CMC technology allows employees to connect 24/7 but also has similar challenges as F2F communication such as decreased team engagement, conflicting schedules, lack of planning, personality conflicts, and lack of management direction (Berry, 2011).

As a new project or team is assembled, researchers such as Briggs, Nunamaker, and Reinig (2009) suggest a kick off meeting which will allow F2F interaction and to set the stage for virtual communication to happen afterwards. Taking the time to build the team and allowing for virtual employees to establish an initial F2F relationship will create a more peaceful and productive team moving forward (DeRosa, 2009). A good team should have key practices they follow to ensure communication is at its highest. As written in *Best Practices for Working in a Virtual Team Environment* (2008), teams should engage each other with topics outside of work discussions to build connectedness and should have “routines of conversation” established to build cohesiveness leading to efficiency (p.30). This routine is very similar to the cultural ritual created by a company to ensure consistency in maintaining a shared meaning. The cultural communication theory addresses the ritualization of communication as a way of building trust in a team as well as creates accountability for productivity (Geertz, 1973).

### **Leadership in a Virtual Team**

Leaders of a virtual team need to have a wider managerial skill set to communicate successfully with their teams to ensure work gets done. A successful team leader must be dedicated to the team's engagement and provide coaching/mentoring opportunities whenever possible. The best virtual leaders have the "ability to create an inspiring sense of aliveness and community without F2F contact" (Kerfoot, 2010, p. 118). With the innovative work culture of a virtual team, an innovative leadership style should also pair with it (Inc, 2011). Therefore, a leader is needed with a good understanding of electronic communication. They also should understand the "complexities and subtleties of dealing with widely different personalities, cultures, and languages making communication far more difficult among virtual team members" (Solomon, 2001, p. 60).

The virtual leader must also instill within his team members an attitude of trust by allowing employees to participate in decision making and by having communication behaviors such as timely responses, in-depth feedback, and openness (Blomqvist & Henttonen, 2005). Without a strong leader out in front, any team whether virtual or not may sure to falter. Ironically, the challenges to a virtual leader remain the same, but occur in different venues where it is not possible to have direct supervision and interaction over the team (Kerfoot, 2010).

Teleworking has grown in some industries but certainly not in all jobs. There are some jobs in which working remotely can be successful such as tech companies, consulting, telemarketing, and clerical. Conversely, jobs and industries involving heavy F2F interaction might not benefit if allowed to work virtually. Those industries include manufacturing, teaching, medicine, and service positions (Golden, 2009). Managers need to be aware of technology changes so that they may accurately evaluate whether taking a job virtually will actually benefit or hinder the way work is being carried out.

As mentioned in *Best Practices for Working in a Virtual Team Environment* (2008), a virtual leader needs to be a cheerleader who will provide the communication tools and direction aimed at increasing team member focus in order to achieve their goals. There are two styles of leadership looked at in Stefano Ruggieri's (2009) study evaluating the *Leadership in Virtual Teams*. Transformational

leadership encourages respect, a heightened level of interest, and to lead by motivation, while Transactional leadership focus more on the exchange of work for rewards system. Leading on a virtual team allows us to redefine the way we look at leadership in a CMC world.

### **Rationale/Summary**

Even though virtual teams rely heavily on technology in order to conduct work, there is a very real human element which involves a virtual team's ability to build trust and having a strong sense of team-work, even being miles apart (Solomon, 2001). Researchers have found factors of differentiating a highly effective virtual team versus a low performing virtual team by noting differences in team composition, communication methods, training, and leadership (DeRosa, 2009) while another study focuses their research on the specific work given to virtual teams as being the main reason for their success or failure (Furumo & Phillis, 2007).

Communication researchers such as Furumo & Pillis (2007) have known that there is no substitute for F2F conversation or interaction even with the popularity and wide acceptance of virtual teams. In 2000, there were approximately 23.6 million teleworkers in the United States which is greater when compared to years past (Solomon, 2001). Since 2000, capabilities of technology have continued to improve and with it companies' desire to create greater opportunities for virtual employees. Videoconference, email, instant messaging and other higher bandwidth technologies will play a big role in helping employees adapt to a virtual work environment and "a decrease in performance should not necessarily be expected as a result" but it still might be perceived by managers of them (Hambley, 2009, p. 18).

This proposed research is critical in answering whether virtual communication and virtual work is truly productive. As beneficial as it can be for the employee, at the end of the day do managers believe CMC allow businesses to get the job done? The following research questions were developed to expand existing research as exemplified by this literature review involving whether virtual work teams are as productive as non-virtual work teams in the eyes of their leader.

- 1) Do managers feel like their virtual teams are more productive than F2F teams?

- 2) How often does a manager speak with their team regarding productivity? Do managers of virtual teams have this conversation more often than managers with non-virtual teams?
- 3) What contributes to managers' perception of productivity?

### **Chapter 3: Scope and Methodology**

#### **Scope**

The population of interest is managers from a Fortune 50 company in the United States. These managers can be of varying tenures with the company as well as of varying tenures of managing a team. Out of this sample of managers, there is a goal of surveying 50% of these leaders who manage a virtual team. For the purpose of this study, a virtual worker is defined as someone who is in an environment separated by other team members/managers for more than 50% of the time thus needing to rely on technology to accomplish organizational tasks. This definition will be provided on each survey so as to maintain consistency of understanding among the participants.

This study is limited to one company due to time restraints and will take into consideration specific company's culture in the analysis session. Working for this particular company will allow for the benefit of relationship building in capturing 50 managers responding to the survey. Ideally among these 50 respondents, there will be a distribution of half of the managers managing virtual employees and half of the managers managing non-virtual employees. A higher response from managers will allow for a greater amount of raw data to analyze. Any and all managers will be considered for the survey. Tenure, number of employees, gender, and department will be non-factors when considering who the survey will go to. The only limiting factor is surveying managers who only are first-line managers. First-line manager is a term used in the company to explain managers who are managing analysts only, not other managers or supervisors. The reason for this limitation is to measure manager perceptions on the productivity of employees who are working towards a specific goal. Higher within the organization, there tends to be more strategic thinking which may be more difficult to measure in terms of productivity. Since this term

is understood among all employees in the company this will ensure that non first-line managers will be taking this survey and thus skewing results.

Survey will be emailed electronically and managers will be invited to take the survey using their computer. This method of distribution will ensure digital results that can be easily manipulated and analyzed. Since the survey is completely anonymous, the hope is that managers will feel like they can express themselves honestly. One source of bias that may arise is the company's culture of treating everyone like they are a part of a family. With this type of mentality, managers may be more forgiving of poor performance or negative productivity.

### **Methodology**

This thesis will be researched using survey methodology and using a seven point Likert-type scale. A quantitative analysis will be done based on the results using a computerized survey method such as Survey Monkey or Form Site. The goal is to compare perceived productivity amongst managers who have virtual employees as well as managers who do not have virtual employees. Appendix A, shows the survey as given to participants. The data from this research will be analyzed quantitatively using the survey seven point scale while the free response section will provide qualitative data that can be directly quoted.

By using this method of research with a large Fortune 50 company there should be overall high construct validity due to sampling managers across all departments and across the country. The sample population consists of only current managers who have direct reports, which leads to greater validity in the accuracy of the target population of managers who are leading and managing every day. This anonymity of this method also increases soundness for the purpose of ensuring open and honest responses with no fear of consequence. Looking back on the three research questions, the survey is developed to address these questions directly.

- 1) Do managers feel like their virtual teams are more productive than F2F teams?
  - a. The survey will compare the productivity scores of managers who have face to face teams compared to the managers who have virtual teams to see if there is a difference in

the manager's perception on their team's productivity. The question in the survey that asks whether the manager manages a virtual team will help differentiate the group of managers who manager virtual teams versus managers who manager only face to face teams.

- 2) How often does a manager speak with his/her team regarding productivity? Do managers of virtual teams have this conversation more often than managers with non-virtual teams?
  - a. This question is answered by the survey questions dealing with a manager's communication of productivity goals in holding his/her teams accountable to being productive. Hopefully this survey will help reveal a positive correlation between perceived productivity and conversation surrounding productivity.
- 3) What contributes to managers' perception of productivity?
  - a. All of the questions on the survey ask about the perception of managers on productivity. With the free response section the hope is to have a clearer understanding of the connection between the managers perceptions of productivity compared to the work arrangement of the employee.

One of the biggest gaps from the research conducted thus far is the limited research that has been done surrounding true productivity in a virtual team as seen from a leader's perspective. As beneficial as it is to have a virtual team who respect, work well, and trust each other, at the end of the day it is their work product that will be ultimately evaluated by the company. Thus, true success and measuring productivity for a virtual team can only be gaged by the person whom the company has deemed suitable to evaluate the virtual team's results: their leader. Therefore, this research will not be focused on the team members in a virtual environment, but instead will be surveying the team's leadership. The goal of this research is to discover whether virtual work teams are as productive as non-virtual work teams as seen from their leader's eyes.

The survey will be given to 70 first-line managers to gather information on the perception of productivity from a manager's perspective. The research study will test the hypothesis of whether or not the virtual employees have higher employee productivity as compared to their traditional work arrangement peers. The free response section will allow for the collection of qualitative statements about employee productivity. After the data is compiled, analysis can then take place as related to the hypothesis that virtual employees' productivity can be just as strong as a traditional employee as seen by their manager. From this research, the hope is to create a recommendation for companies to either adapt more virtual teams in their company culture or not. This study will arm companies with not only the concrete feasibility of virtual employees but also takes account the managers' perception for future recruitment and retention strategies that benefit both worker and employer.

This proposed thesis will examine the impact on virtual work arrangements versus face to face work arrangements and productivity among a workforce. Companies who allow their virtual teams to dictate the best ways of doing things for them, will ultimately result in a more empowered, happier, and higher quality work producers (Techsource, 2008). This topic is significant due to the ever changing work environments and the war on talent which is pushing for greater happiness for employees and greater flexibility to work whenever/wherever they want.

### **Ethical Considerations**

A high level description of the survey purpose will be given along with clear directions, anonymity statement, and appreciation prior to participants beginning. To protect the participants, all surveys will be anonymous with no unique identifiers attached to survey. All participants will be notified that their participation is strictly voluntary and that they can stop the survey at any time. Another protective factor will be the researcher confidentiality of not disclosing the name of the organization these managers belong to.

### **Next Steps**

The next steps of this study will show the results of the data collected from the survey and a detailed analysis of results. A quantitative analysis will be used to see which type of team, virtual versus not virtual, do managers perceives having the highest amount of productivity.

## **Chapter 4: The Study**

### **Introduction**

For this study, the subject was to survey managers with direct reports from the same Fortune 50 Company. As the company is moving towards more virtual work environment, the study focuses on the perceptions of these managers on the productivity of their teams. The criteria that separates the managers responses was whether the leader had direct reports who worked virtually versus direct reports who work in the office with the manager. As defined in this study, working virtually means working in an environment separated by other team members/managers for more than 50% of the time thus needing to rely on technology to accomplish organizational tasks. The survey was completely anonymous and confidential.

### **Data Analysis**

With 70 managers solicited to complete the survey online, 38 responded with completed surveys. The total of 38 individual responses were tabulated and analyzed based on the nine multiple choice questions and one free response question. Out of the 38 respondent 15 of them answered yes to the first question which asks whether the individual manages a virtual team member. There was a 100% completion rate by all participants who began the survey and a 19 out of the 38 respondents went on and responded to the optional free response question. Below is a table breakdown of the respondents.

*Table 1*

	F2F Managers	Virtual Managers	Total
# solicited for survey	35	35	70
# responded to all	23	15	38

questions			
# responded to the free response question	10	9	19
Response rate for all questions	65.7%	42.9%	54.3%
Response rate for free response question	43.5%	60.0%	50.0%

### Question by Question results

Due to the uneven rate of response for F2F managers (23) and virtual managers (15) in responding to all questions, in order to analyze each question and deduce a conclusion 15 random responses from the F2F managers were selected to use in comparison with the virtual manager responses. By comparing same number of respondents (15), there can be assumptions or conclusions drawn on why a F2F manager responded one way compared to the virtual manager. Out of the 23 F2F manager respondents 15 were drawn at random to be used in the study. The 8 other responses were not analyzed as data points in this paper.

Every question had a 7-point Likert scale of different options to choose from going from negative to positive except for the free response question. In order to quantify the results, a point system was used to calculate the total scores between all 30 managers who answered the question. An example below of what the scoring system looks like below:

<i>Never</i>	<i>0 points</i>
<i>Rarely, in less than 10% of the time</i>	<i>1 point</i>
<i>Occasionally, in about 30% of the time</i>	<i>2 points</i>
<i>Sometimes, in about 50% of the time</i>	<i>3 points</i>
<i>Frequently, in about 70% of the time</i>	<i>4 points</i>
<i>Usually, in about 90% of the time</i>	<i>5 points</i>

*Every time**6 points*

*For example, if in one question 3 F2F managers answered Every Time compared to 7 CMC managers who answered Every Time then their scores would be  $3 \times 6 = 18$  F2F managers and  $7 \times 6 = 42$  CMC managers. The higher the score for a particular question results in a higher positive response for the question based on that group of managers.*

**Question #1**

Do you manage virtual team members? (Virtual as defined in this survey as working in an environment separated by other team members/managers for more than 50% of the time thus needing to rely on technology to accomplish organizational tasks)

Responses as seen in Table 1 above

**Question #2**

How often does team follow up on requests?

	<b>F2F Managers</b>	<b>Virtual Managers</b>
Never	<b>0</b>	<b>0</b>
Rarely, in less than 10% of the time	<b>0</b>	<b>0</b>
Occasionally, in about 30% of the time	<b>2</b>	<b>3</b>
Sometimes, in about 50% of the time	<b>2</b>	<b>5</b>
Frequently, in about 70% of the time	<b>4</b>	<b>2</b>
Usually, in about 90% of the time	<b>2</b>	<b>4</b>
Every time	<b>5</b>	<b>1</b>
<b>Total Points</b>	<b>66</b>	<b>55</b>

**Question #3**

How often does your team meet work deadlines?

	<b>F2F Managers</b>	<b>Virtual Managers</b>
Never	<b>0</b>	<b>0</b>
Rarely, in less than 10% of the time	<b>0</b>	<b>0</b>
Occasionally, in about 30% of the time	<b>0</b>	<b>3</b>
Sometimes, in about 50% of the time	<b>3</b>	<b>5</b>
Frequently, in about 70% of the time	<b>2</b>	<b>1</b>
Usually, in about 90% of the time	<b>4</b>	<b>2</b>
Every time	<b>6</b>	<b>4</b>
Total Points	<b>73</b>	<b>59</b>

#### **Question #4**

How often does your team meet the department goals set for them?

	<b>F2F Managers</b>	<b>Virtual Managers</b>
Never	<b>0</b>	<b>0</b>
Rarely, in less than 10% of the time	<b>3</b>	<b>0</b>
Occasionally, in about 30% of the time	<b>4</b>	<b>0</b>
Sometimes, in about 50% of the time	<b>5</b>	<b>6</b>
Frequently, in about 70% of the time	<b>5</b>	<b>4</b>
Usually, in about 90% of the time	<b>3</b>	<b>3</b>
Every time	<b>2</b>	<b>2</b>

Total Points	<b>73</b>	<b>61</b>
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**Question #5**

Level of satisfaction with your team's effectiveness at work

	<b>F2F Managers</b>	<b>Virtual Managers</b>
Completely dissatisfied	<b>0</b>	<b>0</b>
Mostly dissatisfied	<b>0</b>	<b>0</b>
Somewhat dissatisfied	<b>0</b>	<b>1</b>
Neither satisfied or dissatisfied	<b>11</b>	<b>2</b>
Somewhat satisfied	<b>2</b>	<b>5</b>
Mostly satisfied	<b>9</b>	<b>3</b>
Completely satisfied	<b>2</b>	<b>4</b>
Total Points	<b>98</b>	<b>67</b>

**Question #6**

Level of satisfaction with your team's ability to handle criticism of work

	<b>F2F Managers</b>	<b>Virtual Managers</b>
Completely dissatisfied	<b>0</b>	<b>1</b>
Mostly dissatisfied	<b>0</b>	<b>2</b>
Somewhat dissatisfied	<b>1</b>	<b>2</b>

Neither satisfied or dissatisfied	<b>4</b>	<b>6</b>
Somewhat satisfied	<b>7</b>	<b>0</b>
Mostly satisfied	<b>6</b>	<b>1</b>
Completely satisfied	<b>5</b>	<b>3</b>
Total Points	<b>102</b>	<b>47</b>

**Question #7**

Level of satisfaction with your team compared to other teams in the organization

	<b>F2F Managers</b>	<b>Virtual Managers</b>
Completely dissatisfied	<b>0</b>	<b>0</b>
Mostly dissatisfied	<b>0</b>	<b>1</b>
Somewhat dissatisfied	<b>2</b>	<b>0</b>
Neither satisfied or dissatisfied	<b>5</b>	<b>3</b>
Somewhat satisfied	<b>2</b>	<b>8</b>
Mostly satisfied	<b>3</b>	<b>3</b>
Completely satisfied	<b>3</b>	<b>0</b>
Total Points	<b>60</b>	<b>57</b>

**Question #8**

Level of satisfaction with your team's productivity

	<b>F2F Managers</b>	<b>Virtual Managers</b>
Completely dissatisfied	<b>0</b>	<b>0</b>
Mostly dissatisfied	<b>0</b>	<b>0</b>
Somewhat dissatisfied	<b>1</b>	<b>2</b>
Neither satisfied or dissatisfied	<b>1</b>	<b>4</b>
Somewhat satisfied	<b>6</b>	<b>1</b>
Mostly satisfied	<b>3</b>	<b>7</b>
Completely satisfied	<b>4</b>	<b>1</b>
Total Points	<b>62</b>	<b>70</b>

**Question #9**

How often do you have a conversation with your team about their productivity?

	<b>F2F Managers</b>	<b>Virtual Managers</b>
Never	<b>0</b>	<b>0</b>
Very rare	<b>1</b>	<b>1</b>
Somewhat rare	<b>1</b>	<b>0</b>
Neither often or rare	<b>3</b>	<b>1</b>

Somewhat often	<b>3</b>	<b>5</b>
Very often	<b>4</b>	<b>2</b>
Always	<b>3</b>	<b>6</b>
Total Points	<b>62</b>	<b>70</b>

**Question #10**

Please provide any additional feedback on the productivity of your team based on their face to face versus virtual work arrangements.

**F2F Managers**

- “We are most productive when we are all on the same page working towards the same goal.”
- “My team needs little direction and any conversation we have is less about productivity and more about the person’s development.”
- “I don’t know how my team would be if it was all virtual but this is an interesting study.”
- “It seems like we’re getting better but we’re not quite there yet.”
- “I think my team can be better than they are right now.”
- “Productivity can be measured in a lot of different ways but very tricky to put together the right combination in a team to maintain that productivity. Consistency can be challenging.”
- “My team does not work well with each other we are working on it.”
- “I am lucky to have a very high performing team. I inherited this team only a few months ago.”
- “I have never managed a teleworker before, but I see the huge benefits my peers have with their teams who have teleworkers.”
- “My group needs a lot of work, they are made up of all paraprofessional staff and only two members have college educations.”

**Virtual Managers**

- “My team wants constant feedback which helps with how productive they are. They ask for it, and I give it.
- “Keep in mind that this is a group of employees who have never worked together before. We realigned our departments just this past month so this team is extremely new.”
- “I wish my team understands the challenges of leading a team that I cannot see all the time.”
- “Every day is a new adventure with this team because there is so much to learn and do, but we do it together!”
- “It’s all about communicating with them about your expectations and holding them accountable.”
- “I love my team!”
- “I am so proud of my team’s progress. I’m extremely satisfied with how my team keeps each other in the loop. They make time for each other and one person especially on the team organizes all the fun social events we participate in.
- “My team gets their work done but finds critique of their work extremely hard to accept. We have worked on respecting each other over the phone.”
- “I need to work on more one on one meetings with my team but it is hard because of the time zones. Team meetings are especially hard when team members are traveling or out of the office.”

### **Discussion**

Through the findings of this study, the perceptions of a manager’s view on productivity varies based on whether a manager has a F2F relationship with their employees or a virtual one. The communication difference between F2F and virtual work arrangement contribute to the varying perception of managers. Although the results are not conclusive one way or another, it does provide insight into this company’s corporate culture of communication. Deetz’s theory involving the critical theory of communication in organizations involves talking about the encroachment of corporate culture into our daily lives. It is interesting to think about all the benefits of virtual work while also thinking about the negative consequences of literally bringing the work home. According to the survey, it is not conclusive that managers view virtual employees as more productive than non-virtual employees.

Corporate culture is revealed to be different based on the communication method used to and in the final section of this study findings will be discussed, limitations will be identified, and closure will be provided for this study while recommending future opportunities for additional research.

## **Chapter 5: Summaries and Conclusions**

### **Discussion**

Perceptions of employee productivity from a manager's perspective varied significantly among the questions due to the level of details asked. Overall, the perception of manager feeling towards productivity of virtual employees was on average lower compared traditional work arrangements. Results shows out of the 70 managers solicited from the survey a response rate of 65.7% from F2F managers and a response rate of 42.9% from virtual managers. A reason for this could be the overall minority of virtual teams within the organization. Although surveys were sent out to managers who the researcher knew had virtual teams, the team could have been too new for the manager to feel like they could evaluate productivity. This company has a communication culture that is extremely polite and nice which could mean, if managers felt their comments were mainly negative, felt uncomfortable with sharing these negative feelings even if the survey was confidential and anonymous. The survey was given out during the fourth quarter where managers could have run into tougher times with answering surveys not essential for their role due to time constraints. The survey was also only available for 2 weeks also impacting the amount of results collected.

- 1) Do managers feel like their virtual teams are more productive than F2F teams?

#### *Survey Question 4:*

Number four presents the question, how often does your team meet the department goals set for them. There was a deviation of 12 points between F2F managers and virtual managers selections. F2F managers continue to be more confident of their worker's productivity compared to virtual managers. In the free response section, there were numerous posts from virtual managers commenting on the newness of their work teams. From Hinds and Weisband (2003), it was found that virtual team members tend to

share less than with F2F team members. They also tend to have “a weaker shared understandings of needed outcomes, which may cause negative effects on performance outcomes” (Hinds & Weisband, 2003, p. 195). Departments goals can be very high level and difficult to manage. An assumption could be that since the company is still a well majority F2F work arrangements that it could be difficult to change departments goals so that virtual employees can easily meet them as well. Perhaps the current company/department goals do not align well with the virtual working arrangement.

*Survey Question 5:*

Results found in this question show the effectiveness of virtual teams are not nearly as strong as F2F teams as seen by their managers. When ranked, this question is the second most distributed in terms of points between the two types of managers. In the spectrum on average F2F managers in this study were much more satisfied as a group with the effectiveness of their team. According to Aasheim, Butler, and Williams (2007), “telecommuters may be more effective because they receive additional training and/or are selected to become telecommuters because they are already the most productive employees” (p. 102). What if in this company’s situation, the effectiveness of the teleworking employee before they became virtual was not considered? Perhaps because of the changes and realignment going on within the company as mentioned by one of the free responses, there is less strategic thinking taking place in determining who is a virtual employee. Instead, the company is focused more on getting the work done rather than identifying the skill sets necessary for an employee to be successful in a different working environment. This company’s culture of driving results in a fast pace way may be a reason as to the lower effectiveness of the right type of employees in teleworking situations.

- 2) How often does a manager speak with his/her team regarding productivity? Do managers of virtual teams have this conversation more often than managers with non-virtual teams?

*Survey Question 2:*

Results showed an average higher positive response rate for face to face managers with when asking the question “how often does your team follow up on requests?” F2F managers scored 66 points compared to Virtual manager counterparts scoring 55 points. A reason for this difference could be with the F2F manager being physically present, more frequent meetings following up on requests or more often informal conversation allowing employees to update their managers more quickly. The noticeable difference is in the most extreme positive answer of “Every time”. About 5 times more F2F managers answered yes with this affirmation compared to virtual managers. This type of interactions could result in the development of micromanagers who hover following up on work. For virtual teams, “trust has to substitute for hierarchical and bureaucratic controls” thus requiring managers to have the skill set of allowing their employees do their work without watching over their shoulders (Bal & Foster, 2000, p. 4020). The culture of this organization is often one of a conservative nature therefore perhaps virtual managers are not accustomed to a longer time span between communications, since they do not have the informal communication opportunities that the F2F manager has, before an employee follows-up on a request.

On the other, employees in a virtual structure may initially require expectation setting by the leadership on how communication requests are responded to. One of the principles to effective virtual teamwork as shown by Briggs, Nunamaker, and Nunamaker (2009), is finding ways to more effectively focus the virtual team’s attention on the task at hand. Technology, although key to virtual employee’s productivity, can also mean greater “additional distractions as members may choose to view web browsers, email, and instant messaging that are unrelated to the task at hand” (p. 114). A greater focus for virtual teams from task to task and a clearer direction from the leadership in the priority of tasks can help virtual employees to be more responsive when responding to requests.

*Survey Question 3:*

Very similar to question 2, this question asks how often does your team meet work deadlines. Same result as the last question with even a larger point spread of 73 points for F2F managers and 59 for virtual managers. An interesting thing to point out for this question, is the extreme positive answer of

“every time” was much closer in results. On the flip side, there were many more virtual manager who selective negatively to this question in responding that “occasionally, in about 30% of the time” does their employees meet work deadlines. This wide expansion of extremely favorable and unfavorable suggests that this question needs additional research to see if this is a distinctive factor between a virtual communication culture of successfully meeting deadlines and not successfully meeting deadlines.

*Survey Question 9:*

Having a transformational leader is critical in a virtual team environment. In this study, managers were not asked to define their management style but according to Ruggieri (2009), a transformational leader is one who is focused more on the relationship and the future vision of the team versus a task centered focus like a transactional leader is. By having leaders who actively reach out and continue to have conversations with their teams about productivity, they are building those relationships where they can have a comfort level in discussing a sensitive topic such as work product. This question was the only one in which the virtual managers scored higher than the F2F managers which means virtual managers do not take advantage of the fact that their employees are not around. They are making the extra effort to reach out and consistently have conversations with their employees surrounding their productivity. This unwavering determination to address issues as they arise truly shows how the virtual managers have bought into the idea of having a virtual team and are doing everything to make sure their team is successful.

3) What contributes to managers' perception of productivity?

*Survey Question 6:*

This question of asking managers to rank their level of satisfaction with their team's ability to handle criticism of work is one of the most interesting results thus far because of the vast disparity in the results. F2F managers scored a total of 102 points compared to virtual managers who scored 47 points. This result raises an eye on how a team member reacts to negative feedback. A possible reason for this negative feedback backlash is the physical dispersion of team members. Due to time zones, spatial

dispersion, and limited overlapping workdays managers may have a more difficult time providing timely feedback to their employees. Therefore the development of “frequent check-ins” will allow more timely criticism and immediate feedback for “increased accountability among team members” (John et. al, 2005, p. 18). Trust is key when giving and receiving criticism. The manager has to trust that the employee will take their words into heart and the employee has to trust that the critics are honest, fair, and not personal. The loss of trust is fatal to the effectiveness of a virtual team, since individuals cannot be monitored as closely compared to F2F teams (Jarvenpaa et. al, 1998).

*Survey Question 7:*

This question had the closest point score amongst all other questions with F2F managers scoring 60 points and virtual managers scoring 57 points. This question gets at when compared to other teams, whether or not the managers are satisfied with their employees. Up until now, there might have been assumptions that virtual managers are less satisfied with their employees compared to other teams in the company; however, after careful review of the free response questions virtual managers seem much more positive or encouraging of their employees. Comments that suggest community building, enthusiasm, progress, and hope that tomorrow will be even better than today. This suggests that even though virtual managers see flaws in their teams, they still hold them to as high of esteem when comparing them to other teams.

*Survey Question 8:*

This question asks the overall question of whether the manager is overall satisfied with their team’s productivity. Again, similar to question 7, this was the second closest score among managers which suggest a non-significant difference in productivity as seen by the two separate managers. When looking at productivity as a whole, it seems as though virtual teams are just as productivity as F2F teams. It was purposeful to ask this question towards the end of the survey because the managers have been thinking about the productivity of their team and hopefully will reveal their true feelings about their team at this point. Even though there will never be a replacement for face to face interaction, this question

alone shows how managers who manage different work arrangements can feel the same way about their team's productivity no matter what the communication venue.

### **Limitations**

A large constraint was certainly the time in that the duration of the study could have resulted in a higher response rate and thus a more reliable sample size to analyze. With greater time could have come opportunities to look at other Fortune 50 companies to compare and ground results. There is an overall less number of managers in the organization who have virtual teams, therefore, finding them and asking them to take the survey was particularly challenging as well. Using the survey format of digital, internet based survey collection was a good idea initially; however, company firewall prevented managers to access the survey at work therefore, forcing them to send the survey to their home emails. The survey itself, although short, may have been forgotten after the manager was home. In the future, ensuring internet and website access for conducting surveys is a critical first step to ensuring ease of access for survey participants. To mitigate this problem, conducting a survey sample on the work stations at the company could have eliminated the survey access problem. Also, prompt instructions within the email text of asking participants to inform the researcher early if there are any technical errors could have could have allowed for additional survey options such as paper form to be distributed.

A follow-up to this study could study the characteristics of managers who are leaders of virtual teams and identify key leadership traits necessary to be a successful virtual team leader.

This study tries to quantify productivity which can be difficult and sometimes subjective; therefore, another measure of productivity for future studies could be quantitative in nature wherein managers and employees can be interviewed to gain a broader perspective. Another complement to this survey could be to ask employees if they were given the choice to have a different working arrangement, because if there is no buy-in from the employee, then it may be more difficult to get that employee onboard with increasing productivity.

### **Conclusion**

This survey aimed at answering three research questions which were

- 4) Do managers feel like their virtual teams are more productive than F2F teams?
  - a. Overall, not based on this company's survey results.
- 5) How often does a manager speak with his/her team regarding productivity? Do managers of virtual teams have this conversation more often than managers with non-virtual teams?
  - a. Based on the survey responses, there does not appear to be a direct correlation between having more conversation surrounding productivity and actually increasing the perception of productivity of the team.
- 6) What contributes to managers' perception of productivity?
  - a. Everything contributes to a managers' perception of their employees' productivity from responsiveness to requests and criticism of work to meeting department goals and meeting deadlines. What also contributes to the perception of productivity is also how much the manager gives to their team as well. Leadership has as much to do with team success as the individual employees do.

An important strength of this study is that these findings are based upon measures of actual perceptions of management in how they view the productivity of their teams. Because the research was conducted within a single organization, similarly to the study conducted by Aasheim, Butler, and Williams (2007), "generalization of the results to other organizations is limited" (p. 103). It is highly encouraged to conduct similar research on other organizations to determine if the results can be widespread and conclusive.

It was discovered through this research that even though the managers were the participants and had the power to rank their employees based on their perceived productivity, the relationships between a leader and its team is still two sided. This study did not survey the employees, but it is important to recognize that leaders are also in control of the productivity levels of their employees. When looking at productivity as a whole, it seems as though virtual teams are just as productivity as F2F teams. When looking at the questions with the most dispersion in answers compared to the question with the least

dispersion, it seem questions that were more narrow and specific caused a wider separation in points, but when the questions were broader the separation in points was less apparent. Virtual teams still have a greater productivity weakness compared to their F2F counterparts, but this survey's data cannot conclusively determine if this is the case universally. Even though the productivity of employees on virtual teams was lower than their counterparts, the verbatim comments presented by their leadership in the free response section of the survey expressed greater feelings of encouragement and compassion.

This survey uncovered the communication culture and separation that occurs with having two very different work arrangements. This company's organizational culture needs to change and be more flexible to the technological changes that are allowing for virtual employees to be more successful. This thesis focuses on a leader's perspective to show how powerful a leader can be in his/her influence over the culture of their team. Managers need to influence their team, have consistent conversations, build trust, and personify the change that they want to see in the organization. This survey set out to discover manager perceptions on team productivity but actually uncovered more questions about how leaders could better be prepared to lead F2F or virtual teams. Companies who have successful virtual teams have managers/leaders that "understand the unique characteristics of electronic communication and are able to create a sense of community" (Sonomon, 2001, p. 60). Virtual work environments are still a new concept for companies and perhaps a greater emphasis on development of managers are necessary in creating more productive virtual teams.

### Appendix: Survey

**Please complete this questionnaire as it is designed to better understand the productivity in a team environment as perceived by the leader.**

**Responses will be completely anonymous and your name or company will not be associated with the findings in any way. You do not have to answer any questions you do not wish to and are free to stop taking the survey at any time. Your participation is much appreciated but strictly voluntary.**

**Please read each question carefully and answer honestly.**

**The survey should take between 6-8 minutes to complete. Thank you in advance for your participation.**

1. Do you manage virtual team members? (Virtual as defined in this survey as working in an environment separated by other team members/managers for more than 50% of the time thus needing to rely on technology to accomplish organizational tasks)
  - a. Yes
  - b. No

**Please read each question and rate your level of agreement with each statement by selecting the value that most closely represents your opinion.**

2. How often does team follow up on requests?
  - a. Never
  - b. Rarely, in less than 10% of the time
  - c. Occasionally, in about 30% of the time
  - d. Sometimes, in about 50% of the time
  - e. Frequently, in about 70% of the time
  - f. Usually, in about 90% of the time
  - g. Every time
3. How often does your team meet work deadlines?
  - a. Never

- b. Rarely, in less than 10% of the time
  - c. Occasionally, in about 30% of the time
  - d. Sometimes, in about 50% of the time
  - e. Frequently, in about 70% of the time
  - f. Usually, in about 90% of the time
  - g. Every time
4. How often does your team meet the department goals set for them?
- a. Never
  - b. Rarely, in less than 10% of the time
  - c. Occasionally, in about 30% of the time
  - d. Sometimes, in about 50% of the time
  - e. Frequently, in about 70% of the time
  - f. Usually, in about 90% of the time
  - g. Every time

**Please read each question and rate your level of satisfaction with each statement by selecting the value that most closely represents your opinion.**

5. Level of satisfaction with your team's effectiveness at work
- a. Completely dissatisfied
  - b. Mostly dissatisfied
  - c. Somewhat dissatisfied
  - d. Neither satisfied or dissatisfied
  - e. Somewhat satisfied
  - f. Mostly satisfied
  - g. Completely satisfied
6. Level of satisfaction with your team's ability to handle criticism of work
- a. Completely dissatisfied

- b. Mostly dissatisfied
  - c. Somewhat dissatisfied
  - d. Neither satisfied or dissatisfied
  - e. Somewhat satisfied
  - f. Mostly satisfied
  - g. Completely satisfied
- 7.** Level of satisfaction with your team compared to other teams in the organization
- a. Completely dissatisfied
  - b. Mostly dissatisfied
  - c. Somewhat dissatisfied
  - d. Neither satisfied or dissatisfied
  - e. Somewhat satisfied
  - f. Mostly satisfied
  - g. Completely satisfied
- 8.** Level of satisfaction with your team's productivity
- a. Completely dissatisfied
  - b. Mostly dissatisfied
  - c. Somewhat dissatisfied
  - d. Neither satisfied or dissatisfied
  - e. Somewhat satisfied
  - f. Mostly satisfied
  - g. Completely satisfied
- 9.** How often do you have a conversation with your team about their productivity?
- a. Never
  - b. Very rare
  - c. Somewhat rare

- d. Neither often or rare
- e. Somewhat often
- f. Very often
- g. Always

**10.** Please provide any additional feedback on the productivity of your team based on their face to face versus virtual work arrangements.

Your survey is now complete.

**Thank you for taking the time to complete this survey. Your feedback will be used to complete my graduate school thesis. Your answers and identity will be completely anonymous.**

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