

# Effective Leadership in Virtual Teams

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This study explores effective leadership within virtual teams by closely analyzing communication patterns observed in online gaming teams. Through interviews conducted with both student leaders of gaming teams and corporate managers, along with conversation analysis on gameplay screen captures, the research identifies key behaviors that are essential for fostering successful team dynamics. The findings underscore the critical role of concise communication, pre-action notifications, and immediate feedback, drawing important parallels between the rapid decision-making necessary in gaming environments and the structured demands faced by virtual teams in corporate settings. Furthermore, the study addresses challenges such as managing response time lags and the pressures of providing real-time feedback in virtual environments. The insights gathered from this research suggest that strategies commonly used in online gaming can be effectively adapted to enhance leadership and team collaboration in corporate settings, especially as remote work and virtual collaboration continue to grow in prevalence.

## 1. Introduction

In recent years, there has been growing attention on virtual teams. Research on virtual teams, particularly regarding team formation, leadership, and communication within geographically dispersed teams, has been conducted since the 1990s. However, these studies were primarily focused on issues faced by a few global companies or a few global leaders, and thus, were not relevant to the majority of people. Yet, with the recent advancements in IT and the impact of COVID-19, working in virtual teams has become a more common issue for many.

According to Schweitzer & Duxbury (2010), virtual teams are defined as teams whose members do not share a common physical workspace all the time and must therefore collaborate using communication and collaboration tools such as email, videoconferencing, and other digital technologies<sup>[1]</sup>. Anoye & Kouamé (2018) highlight the challenges of leadership in virtual teams, emphasizing the need for shared leadership responsibilities and context-specific training programs. Leadership in virtual teams is a complex and multifaceted concept<sup>[2]</sup>, with various studies focusing on different aspects of its impact on team effectiveness. The discussion on effective leadership in virtual teams is still in its early stages.

From another perspective, online games have been suggested as potentially valuable tools for leadership development. They are particularly noted for their use in honing skills such as decision-making in complex situations, motivating teams, and fostering collaboration. For example, it has been reported that in-game experiences can contribute to the development of leadership, with team play providing opportunities for players to enhance their leadership skills (Jang & Ryu, 2009)<sup>[3]</sup>. Moreover, Mysirlaki & Paraskeva (2012)<sup>[4]</sup> suggest that massively multiplayer online role-playing games offer a dynamic environment that strengthens skills such as team building, decision-making, and risk management.

The aim of this study is to analyze communication patterns in online gaming teams and apply these insights to improve leadership in corporate virtual teams. The research seeks to uncover strategies that can be applied to virtual teams in

professional environments. To achieve this goal, the author employs a combination of interviews and conversation analysis to explore communication within virtual teams, specifically within online gaming teams.

In this paper, the authors discuss the identified communication patterns and their potential impacts on team dynamics. Additionally, the paper provides practical insights for improving leadership and collaboration in virtual environments.

## 2. Method

The methodology of this study consists of three qualitative methods:

- (a) Group interview with students: Conducted with two students who are leaders of online gaming teams to investigate which leadership behaviors have a positive impact on their teams.
- (b) Conversation Analysis: Performed on screen captures of a competitive match in the game *Overwatch*, where two teams of five players each competed.
- (c) Interviews with Managers: Conducted with managers who lead online gaming teams and also hold roles such as project management or section management in companies. These managers provided insights through interviews and interpretations of the screen captures.

### 2.1 Research Design and Objectives

The purpose and role of each research method are as follows:

#### (a) Student Interviews

Purpose:

- To understand the reality of leadership in online gaming teams
- To identify effective communication strategies

Role:

- To provide fresh perspectives on leadership in virtual environments
- To present concrete examples of communication patterns in games
- To suggest innovative approaches that can be applied to corporate environments

### (b) Conversation Analysis

#### Purpose:

- To observe real-time communication patterns in online gaming teams
- To identify specific leadership behaviors and their immediate effects
- To analyze the structure and flow of team interactions in a virtual setting

#### Role:

- To provide empirical evidence of communication strategies in action
- To offer detailed insights into the dynamics of virtual team interactions

### (c) Corporate Manager Interviews

#### Purpose:

- To identify challenges faced by virtual teams in corporate settings
- To evaluate the practical applicability of strategies observed in gaming environments
- To analyze similarities and differences between corporate and gaming environments

#### Role:

- To provide insights based on practical experience
- To validate findings from the gaming environment
- To reveal the current state and challenges of virtual team management in corporations

### Integrated Analysis

The combination of these three methods allows for a comprehensive examination of virtual team leadership:

- **Applicability assessment:** Evaluate gaming strategies (a) and (b) against corporate managers' experiences (c) to determine their effectiveness in professional settings.
- **Holistic understanding:** Synthesize insights from all three methods to develop a comprehensive model of effective virtual team leadership.
- **Practical implications:** Combine innovative gaming approaches (A and B) with corporate constraints (c) to formulate actionable recommendations for improving virtual team leadership.

This integrated approach ensures that the research captures both the unique aspects of gaming team leadership and the practical realities of corporate virtual teams, leading to more robust and applicable findings.

### 2.2 Interviews with Student Leaders of Online Gaming Teams

A group interview was conducted with two students who serve as leaders of their respective online gaming teams. The interview lasted approximately one hour and focused on questions such as what type of leadership boosts team motivation, improves performance, or enhances the team atmosphere. The interview followed a semi-structured format, allowing for in-depth exploration of how these leaders guide their teams and the key aspects they consider when leading an online gaming team. The Author interviewed leaders from both Overwatch and VALORANT to identify common communication strategies and leadership qualities in competitive team-based games.

### 2.3 Conversation Analysis of a Game's Screen Capture

One of the students who participated in the group interview provided a screen capture of their online gaming team's gameplay

for analysis. The conversation analysis focused on a segment of the match.



**Figure 1: Game's Screen Capture**

The screen capture, as shown in Figure 1, was annotated by the student to indicate what actions were being performed during the game. And the author was provided with screen captures that included voice chat audio from gaming teams, and we analyzed the conversations. Additionally, a follow-up interview was conducted while reviewing T The screen capture, allowing the student to further explain the context and actions being taken during the gameplay. For the screen capture analysis, we chose Overwatch specifically due to its stronger emphasis on teamwork. Overwatch's gameplay requires more coordinated team efforts, making it ideal for observing leadership dynamics and team communication in action.

### 2.4 Interviews with Manager

To achieve the objectives of this study, the author conducted interviews with individuals who fit the following profile:

- Corporate managers who hold roles as project managers or section managers in companies with over 100 employees.
- Managers with experience managing teams of three or more subordinates in a remote environment.
- Individuals who regularly participate in team-based online gaming competitions as a hobby.

Five individuals were selected for the interviews, and their profiles are shown in Table 1.

During the interviews, which lasted approximately one hour each, the managers were asked about the differences between virtual teams in the workplace and online gaming teams, the challenges they encounter in managing virtual teams at their companies, and their observations and interpretations of a screen capture provided earlier.

**Table 1: Interview Subjects (Managers)**

ID	Industry	Section	Position	Gender
a	Consulting	Consulting	Manager	Male
b	Chemical Manufacturer	IT	Manager	Male
c	Services	Operations	Manager	Female
s	IT	Consulting	Section Chief	Male
d	Services	Planning	Department Manager	Male

### 3 Result and Analysis

#### 3.1 Effective Leadership in Online Gaming Teams

Two first-year university students, who were team leaders of online gaming teams, participated in an unstructured group interview. One was the leader of a VALORANT team, and the other led an Overwatch team. According to Fukunaga (2024), the interviews revealed several key behaviors that contribute to effective leadership within online game teams:

- **Concise Communication:** Short, precise instructions are crucial for game leaders and equally valuable in virtual teams for efficient communication.
- **Broad Perspective:** A comprehensive view is essential for making strategic decisions, important for leaders in guiding their teams.
- **Calm Decision-Making:** Making decisions under pressure is critical, especially for leaders facing business uncertainty.
- **Immediate Feedback:** Instant feedback enhances team performance and helps maintain motivation and skill development in organizations.
- **Positive Attitude:** Maintaining team morale and motivation is key for fostering resilience and innovation.
- **Initiative:** Creating opportunities for team actions is vital, particularly for launching projects and solving problems in organizations<sup>[5]</sup>.

Building upon the interviews conducted by Fukunaga (2024), this study further explored the details through screen capture analysis and manager interviews.

#### 3.2 Communication Analysis from Screen Capture

One of the students who participated in the group interview provided a screen capture of their gameplay. The game, Overwatch, is played in teams of 5 versus 5. The roles of the five members of the allied team are distributed as shown in Table 2. When the number of utterances was counted, the roles and the number of utterances were as indicated in Table 2. A summary of the conversation analysis is provided in Table 3. The analysis was conducted while listening to explanations and interpretations of the gameplay. The game is free-to-play and has over 6 million players worldwide. It enjoys significant popularity, particularly in North America, Asia, and Europe, and is a key title in the esports world with regular international tournaments.

**Table2: Game Players**

Name	Role	Number of Utterances
A	DPS (Damage per Second)	11
B	Tank	11
C	Support	2
D	DPS (Damage per Second)	8
E	Support	9

In many multiplayer online games, team composition is key to success, with roles typically divided into three categories: Tank, DPS, and Support.

- **Tank:** Protects the team by absorbing damage and attracting enemy attacks, using high health and defense to control the battlefield.

**Table3: Convesation Analysis Summary**

Time	Event	Summary	impact
0:18	Strategic Planning Session	A: Proposes attacking from the bridge	+
		B: Acceptance	+
		D: Proposes attacking from below the bridge	+
		B: Acceptance	+
0:26	Initial Engagement	A: Reports enemy composition	+
0:30	Combat Phase	B: Targeting Directive	+
		B: Advance Command	+
0:46	Combat Phase	E: Repeatedly yells Targeting Directive	-
0:48	Combat Phase	B: Declares pursuit of DPS (Damage Per Second)	
0:55	Next Combat Preparation	A: Declaration	
1:07	Tactical Positioning	A: Declaration (whispering)	-
1:11	First Contact with the Enemy	(There is no conversation)	
1:29	Combat Phase	(There is no conversation)	
1:35	Combat Phase	E: Gives instructions to support	+
		B: Issues general instructions	
1:46	Combat Phase	A: Declares retreat and re-entry	
		A: Announces casualty (loudly, for a long time)	-
1:57	Combat Phase	B: Declaration	
		E: Declares Ultimate Ability Readiness	
2:04	Role/Character Switch	A: Reports role/character switch	
2:10	Emotional Expression	B: Utters "Not good, not good" (for a long time)	-
2:16	Verbal Emotional Response	B: From "Okay" to a scream	
2:45	Combat Phase	B: Countdown (joking)	
3:00	Combat Phase	D: Reports enemy actions	+
3:12	Combat Phase	E: Gives instructions to A	
		A: Ignores those instructions	-
3:15	Combat Phase	B: Focuses instructions on the pig	
		D: Refuses those instructions	
3:22	Combat Phase	E: Requests focus on Kiriko	
		A: Requests focus on Ana	
3:31	Combat Phase	D: Reports enemy isolation possibility	+
3:35	Object Involvement	E: Reports involvement with the object	+
3:44	Verbal Emotional Response	C: Reported being killed	+
3:49	Verbal Emotional Response	D: Report of reaction to an ally's death (for a long time)	-
4:16	Combat Phase	C: Reports enemy movement	
		B: Emphasizes survival	
4:20	Combat Phase	A: Ignores that instruction	
		B: Changes instruction	
4:24	Combat Phase	E: Praises ally's ultimate ability usage	
		D: Reports a kill	+
4:41	Combat Phase	E: Praise	+
		A: Requests help	+
4:44	Combat Phase	B: Responds to request	+
		E: Gives instructions to D	+
4:50	Combat Phase	A: Issues instructions to allies while dead	+
5:08	Verbal Emotional Response	D: Announces casualty (for a long time)	

- DPS: Focuses on quickly dealing significant damage to enemies, relying on Tank protection and Support healing.
- Support: Provides healing and buffs to enhance team performance, ensuring Tanks and DPS can operate effectively.

These roles work together to form the foundation of successful team strategies, requiring specific skills and coordination to achieve the team's objectives.

### 3.3 Finding from the communication Analysis

Table 3 is Conversations Analysis Summary.

Through interviews conducted while reviewing the screen capture of the online gaming team, the author able to gain insights into actions that lead to positive outcomes as well as those that result in negative outcomes within the team. The following is a summary of these findings.:

**Instruction-Action-Feedback Sequence:** The effective loop of giving clear instructions, receiving confirmations, taking actions, and providing feedback is crucial for ensuring precise and effective communication in virtual teams. For example, in the context of the game, this could involve a scenario where one player says, "I'm heading to this, so bring the vehicle over," to which the teammate responds, "Okay, vehicles in position," followed by, "Thanks."

This process is similar to the IT concept of a "three-way handshake," which ensures accurate and reliable exchanges (Figure 2).

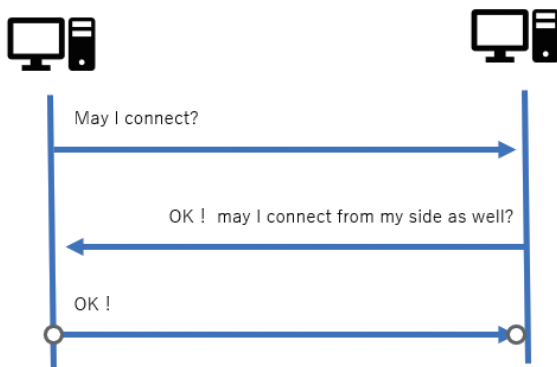


Figure 2: 3Way Handshake

**Pre-Action Communication:** Clearly stating intended actions before executing them helps in aligning the team, especially in virtual environments where physical cues are absent, ensuring that all team members are on the same page. In virtual teams, where members are not physically present, it's hard to know what others are planning.

Therefore, notifying the team of your next move, such as saying "I'm moving to the right," helps everyone adjust their actions more easily. This was highlighted as essential for effective virtual team management.

**Motivational and Immediate Feedback:** Using short, motivational phrases like "Good job", "OK" and providing immediate feedback are essential for keeping the team motivated and engaged, helping to sustain momentum and focus.

**Humor and Negative Tone Management:** The use of humor was identified as a powerful tool for creating a relaxed and productive atmosphere within the team. By fostering an environment where information can be shared more freely, important insights are more

likely to surface, potentially leading to more favorable outcomes in competitive situations. However, it is also crucial to manage the tone to avoid excessive negativity, which can undermine the team's overall performance.

**Concise Communication:** Keeping communication short and to the point is vital for maintaining focus and preventing the team from becoming overwhelmed or losing concentration, ensuring that essential information is effectively conveyed. In games, it was found that long, emotionally negative statements can make it difficult to hear important information and prolong a negative atmosphere, which is not ideal.

### 3.4 Finding from the Manager Interview.

Table 4 highlights the key differences and similarities between online gaming virtual teams and organizational virtual teams, focusing on factors frequently mentioned by managers. Both teams prioritize goal achievement, but online gaming teams emphasize winning through voluntary cooperation, while organizational teams focus on achieving corporate goals through specific tasks.

Communication and tools differ significantly: online gaming teams use real-time in-game chat and voice chat for quick decisions, whereas organizational teams rely on emails, video conferences, and project management tools for medium to long-term communication and documentation. Trust in online gaming teams is linked directly to performance and rapid decision-making, while in organizational teams, it is built over time through long-term collaboration.

Despite these differences, both team types emphasize the importance of effective communication, leadership, and emotional intelligence for success. Cooperation for goal achievement is essential in both settings, underscoring the significance of collaboration. This analysis highlights the shared principles critical to team performance across contexts.

This study incorporated the perspective of corporate managers, which was not covered in Fukunaga (2024)<sup>[5]</sup>, and gained the following insights:

**Importance of Long-term Trust Building:** Unlike online gaming teams, it became clear that long-term collaboration is essential for trust building in corporate virtual teams.

**Challenges of Real-time Feedback:** In corporate environments, providing immediate feedback and managing differences in time perception were newly identified as challenges.

**Adaptation of Communication Strategies:** The need to adapt effective communication strategies from gaming environments to corporate settings became clear. Particularly, strategy adjustments are necessary from the perspective of managing long-term projects and ensuring stability.

These new findings deepen our understanding of leadership in virtual teams and enhance practical applicability. The major contribution of this study is the identification of commonly applicable elements while clarifying the differences between gaming and corporate environments.

In interviews, many managers reported struggling with providing quick, real-time feedback and managing discrepancies in time perception with their team members. Additionally, some managers found it challenging to build trust with their teams.

**Table4: Differences and Commonalities Between Online Gaming Teams and Organizational Virtual Teams**

Perspective	Online Gaming Virtual Teams	count*	Organizational Virtual Teams	count*
Purpose and Mission	- Achieving in-game missions and winning competitions	4	- Achieving corporate goals and project objectives	4
	- Voluntary cooperation based on shared interests and enjoyment	5	- Engaging in specific tasks and projects	5
Team Structure and Roles	- Flexible role distribution	3	- Clear role assignments and official leaders	3
	- Spontaneous leadership	3	- Leadership directed by higher-ups	4
Communication and Tools	- Real-time communication via in-game chat and voice chat	2	- Use of emails, video conferences, and project management tools	2
	- Fast information sharing and communication	3	- communication over the medium to long term	4
Trust and Cooperation	- Trust directly linked to in-game performance	2	- Building trust through long-term collaboration	1
	- Rapid decision-making and cooperation	4	- Formal communication and documentation	2
	- High transparency and easy trust-building	1	- Building trust over time	4
<b>Commonalities</b>				<b>count*</b>
Trust and Cooperation	- Trust and cooperation are essential for team success			3
	- High trust promotes cooperation among team members and improves performance			3
	- Trust and cooperation directly lead to achieving goals			3
Communication and Tools	- Effective communication is crucial			5
	- The choice and use of appropriate communication tools impact team outcomes			2
	- Real-time information sharing and decision-making through digital tools			3
Leadership	- Effective leadership significantly contributes to team performance			5
	- Emotional intelligence and transformational leadership of the leader are important			3
	- Motivating team members and guiding them toward goal achievement			5
Cooperation for Goal	- Teams need to work together toward common goals			5
Achievement	- Cooperative relationships are essential for success in achieving goals			5
	- The importance of team members cooperating with each other			5

\*count:number of managers who mentioned a topic in the 5-manager interviews

### 3.5. Comparison of Student and Corporate Manager Interviews Communication Strategies

Students: Emphasized concise communication, pre-action notifications, and immediate feedback.

Managers: Acknowledged importance of immediate communication in corporate settings, but stressed need for more structured, long-term strategies.

#### Trust Building

Students: Quick trust-building through performance; easy team member replacement.

Managers: Identified trust-building as a major challenge, especially with newcomers; emphasized long-term strategies and difficulty in virtual settings.

#### Team Dynamics

Students: Flexible roles, spontaneous leadership, quick decision-making.

Managers: Noted need for structured roles, official leadership, and maintaining cohesion over time.

#### Application of Gaming Strategies

Students: Fundamental to success in gaming environments.

Managers: Recognized potential benefits but stressed insufficiency for corporate management; emphasized need for additional strategies.

#### Challenges

Students: Focused on in-game, short-term challenges.

Managers: Identified broader, long-term challenges like trust-building and sustained performance.

## 4. Discussion

This study explored the communication and leadership dynamics in online gaming teams and their relevance to corporate virtual teams. It highlighted that gaming environments, characterized by real-time decision-making and spontaneous leadership, emphasized concise communication through an Instruction-

Action-Feedback loop, akin to IT's "three-way handshake." Pre-action communication was found to be crucial for improving coordination in corporate settings. Additionally, motivational feedback and humor helped maintain team morale, while managing negative emotions was essential to prevent disrupting team dynamics. Furthermore, the importance of trust-building in virtual teams, as highlighted by Wilson, J. M., et al. (2006) was strongly supported by the interviews with managers in this study<sup>[6]</sup>.

While online gaming teams operate in short, intense bursts with flexible roles, corporate teams often manage long-term projects that required stability. Therefore, gaming strategies need to be adapted to meet corporate demands. Differences in industries, job roles, and the nature of required tasks suggested that there could be situations where these strategies are applicable and others where they are not. A small sample size may have limited the generalizability of the results, and short-term data may not have fully captured long-term impacts. Future research should address these limitations. Nonetheless, I believe that this study offered valuable insights for developing effective leadership practices in corporate settings.

## 5. Conclusion

In conclusion, this study explored the similarities between communication in online gaming teams and corporate virtual teams. The fast-paced, real-time communication strategies in gaming environments offered valuable insights for enhancing leadership in corporate settings, particularly through clear, concise communication, pre-action notifications, and immediate feedback to boost team performance.

While gaming was driven by short-term goals and flexible dynamics, corporate environments often demanded sustained, long-term approaches to leadership and collaboration. This highlighted the importance of adapting gaming strategies to fit the structured needs of corporate teams. Although the applicability

may be limited depending on the context, I believe that the communication protocols derived from online gaming teams can contribute to building trust between managers and their team members.

Finally, the findings indicated that further research should explore how these insights could be applied across various organizational contexts, especially as remote work became more prevalent. By bridging the gap between gaming and corporate virtual teams, this study contributed to the ongoing discussion on developing effective leadership practices in virtual environments.

## **Acknowledgments**

This paper was made possible by the cooperation of students who participated in interviews and provided screen captures. I am grateful to the managers who shared insights into online gaming and its differences from corporate virtual teams. Special thanks to Takuya Okamura for his contributions and to Masahiro Sato and Atsuko Yamazaki for their guidance.

## **References**

- [1] Schweitzer, L., & Duxbury, L: Conceptualizing and measuring the virtuality of teams. *Information Systems Journal*, 20. (2010).
- [2] Anoye, A., & Kouamé, J: Leadership Challenges in Virtual Team Environment. *International Journal of Scientific & Technology Research*, 7, 160-167. (2018).
- [3] Jang, Y., & Ryu, S: Exploring game experiences and game leadership in massively multiplayer online role-playing games. *Br. J. Educ. Technol.*, 42, 616-623. *Information System Journal*, Vol.20, No.3, pp.267-295 (2011).
- [4] Mysirlaki, S., & Paraskeva, F: Leadership in MMOGs: A Field of Research on Virtual Teams. *Electronic Journal of e-Learning*, 10, 223-234. (2012).
- [5] Sumiko Fukunaga, Effective leadership in virtual teams : Insights from Online Gaming Teams. *The 39th Conference Proceedings of Association of Industrial / Organizational Psychology*. pp.88-91 (2024).
- [6] Wilson, J. M., Straus, S. G., & McEvily, B: All in due time: The development of trust in computer-mediated and face-to-face teams. *Organizational behavior and human decision processes*, 99(1), 16-33. (2006).