NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE

Final Report

Leadership and Team Simulation: Everest V3

Team 4

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1. Introduction

1.1 Roles

Our team consists of five members. We have Kshitij as the 'Leader', Joshua as the 'Pharmacist', Enzo as the 'Environmentalist', Sofia as the 'Marathoner', Shu Gek and Wenxin as the 'Photographer'.

1.2 Goals and Collective Orientation

Our team had clear goals focused on collective achievement and solidarity. We aimed to ensure that every member progressed together, without leaving anyone behind or needing rescue. Our strategy involved prioritizing activities that would benefit the team as a whole, such as staying at camp to conserve energy and resources for the entire group.

1.3 Decision Making

In making decisions, we adopted a consensus-based approach that emphasized the input of every team member, fostering an environment of open dialogue. According to a column published on the University of Minnesota Extension titled 'Benefits of consensus decision making', consensus decision-making offers numerous benefits. By involving all group members in discussions and decisions fosters stronger support for follow-through, resulting in high-quality outcomes. This approach proved to be powerful when each of our team members invested time and contributed value-adding input in formulating decisions and strategies during the simulation. Additionally, we distributed roles and responsibilities to ensure a division of labor, allowing each member to contribute effectively to our shared objectives. Time constraints, however, were a recurring issue, exacerbated by indecisiveness, impacting our ability to fully explore all potential strategies.

1.4 Conflict Management

Rather than actively engaging in conflict management, we prioritized open communication and collaboration to prevent disagreements from arising. By valuing each other's perspectives and fostering a culture of respect and understanding, we sought to address any potential conflicts before they escalated. Our focus on teamwork and collective success helped us maintain a harmonious atmosphere throughout our endeavors. On a positive note, communication within the team was commendable. Every member felt comfortable expressing their thoughts and ideas, fostering an environment of open dialogue. We took the time to listen to each other's input and suggestions, valuing the diversity of perspectives within the team. However, a setback occurred when a team member arrived late, disrupting our planned schedule and necessitating a reassignment of roles, from a photographer to a marathon runner. This not only delayed our start but also led to a member needing to familiarize herself with new responsibilities and objectives. Furthermore, our cautious approach in the early rounds, aimed at minimizing risk, ultimately proved to be a double-edged sword. While it allowed us to proceed methodically, it also meant that we missed opportunities to act more decisively. As a result, we found ourselves having to make rushed decisions in later rounds, which compromised our ability to maximize points, particularly evident in the disappointing outcome of bonus challenge 3 concerning the Hillary step. Despite these challenges, the strategy of having one of our team members fulfill/replace a certain role proved beneficial. It allowed for a holistic oversight of our activities, ensuring that no crucial information was overlooked. This individual acted as a bridge between team members, facilitating effective collaboration and ensuring that everyone's contributions were duly considered.

2. Challenges

2.1 Indecisiveness and Slow Decision Making

2.1.1 Prioritised making the 'correct' decision over quick decisions

The team had a desire to make perfectly correct decisions at each step of the simulation. As a result , there was usually a high amount of indecisiveness, as members shared their thoughts and ideas on how best to approach the challenges and requirements of each day. While getting input from all members benefited the moral of the team and indeed meant that thorough and well thought-out decisions were made, the desire to make 'perfect' decisions over quicker and potentially less 'correct' decisions in the interest of time, lead to crucial time loss that could have been avoided and heavily impacted the effectiveness and functionality of the team towards the end of the simulation.

2.1.2 Uniform decision making rather than majority voting

Secondly, because we had not interacted much with each other before the exercise, we wanted to ensure that everyone had an opportunity for their inputs to be heard and considered by the group. Consequently, the team operated with a desire for uniformity in our decision making, rather than just a majority vote on decisions. This meant that if ever a single member were uncertain about a particular action that the rest had agreed on, the idea was taken back to the table to be discussed more. This ultimately meant that decisions, especially in early rounds, required long conversations to reach consensus and make the appropriate actions, culminating in, although successful, an overall slow decision making process.

2.2 Risk Tolerance

2.2.1 Prioritization of Goals Favoring Low Risk Tolerance

The 'success' of teams was measured by the number of both individual and team points accumulated and bonus challenges completed. Thus, we decided it would be best to share what the point goals of each of our characters were. This was done by going around in a circle, outlining our goals and their respective points, which were noted on the whiteboard. From this, we were able to determine what goals had the most points assigned to them, what goals overlapped and could be completed in tandem and which ones required compromise to complete, ultimately allowing us to create a priority list of goals, which we used to address tasks.

During the exercise, the team had a reasonably low risk tolerance, as survival points weighed heavily on the team's overall score. Gantz and Philpott (2013) outline in their book that "when the residual risk relevant to a given decision exceeds the risk tolerance, the [team] … may opt not to go forward with the risk". Thus, we wanted to ensure we achieved the tasks that got us the largest amount of points safely, and avoid challenges that only awarded a small number of points for large risks, to align with our risk tolerance .

2.2.2 Setbacks of Low Risk Tolerance

However, this approach ultimately cost us some points on the final day. While three members had reached the final camp, and two had sufficient physical and mental conditions to attempt the summit climb, we decided against these players pushing towards the summit. This decision again was based on risk tolerance. While having the two members summit Mt. Everest would have rewarded us with 4 points, any member being rescued would cost us 5 points . This meant that we might lose a total of 10 points in the worst-case scenario where both members who chose to

summit Mt. Everest if they needed to be rescued; and as a result, despite gaining 4 points, it would still be a net loss for us. Ultimately, because of our low risk tolerance, we decided against the summit option to secure the ten points for not being rescued, which impacted our teams overall performance compared to others.

2.3 Time Management

2.3.1 Imbalance in time allocation across different tasks

A notable flaw in the team's functionality was our time management. The indecisiveness within the team in trying to make the 'correct' decision during the early rounds lead to unnecessary losses of time to complete the simulation. This resulted in the final two rounds of discussions being truncated as decisions needed to be made quickly and ultimately resulted in us failing the final team challenge (the Hillary Step).

2.3.2 Oversharing of information in the beginning: Fear of missing out on vital information

As a culmination of wanting to achieve a high points score and wanting to make 'correct' decisions to maximize our chances of doing so, during the early rounds and before the exercise actually began, the team was prone to oversharing of information, often times reading out and sharing information that had been mentioned prior, or that was not relevant to how a challenge should be approached or decision be made. This was done largely out of the fear of missing out on vital information as we believed it may lead us to make a hasty or ultimately 'incorrect' decision, which would impact not only the team score, but moral and effectiveness as well. This information overload contributed to aforementioned indecisiveness within the team and cost us time during the early rounds of the simulation. However, as rounds progressed the team got

better at determining what information was unique and needed to be shared, and what information was common amongst members of the team and was less vital to making decisions.

3. Analysis

3.1 Interest/Goal Asymmetry

Initially, individual team members possessed differing objectives and motivations that could have impacted team dynamics and performance. However, we proactively managed these challenges by prioritizing transparency regarding personal goals and emphasizing collective success over individual achievements. From the outset of the challenge, team members openly communicated their respective goals and motivations. This transparency fostered a sense of mutual understanding and trust among team members, which was instrumental in preemptively addressing potential conflicts that could arise from differing priorities.

Without proactive management of goal asymmetry through transparent communication and goal alignment, our team could have faced challenges in maintaining a cohesive and productive dynamic. Conflicting goals related to pacing, rest breaks, or route selection could have hindered effective teamwork and coordination, leading to misunderstandings or lack of alignment in team strategies and tactics.

While prioritizing team score, we simultaneously aimed to maximize individual scores without creating conflicts with other team goals. By emphasizing collective success, we encouraged a collaborative mindset where individual goals were aligned with the team's objectives. This helped to mitigate the impact of goal asymmetry by redirecting focus towards shared outcomes

and minimizing potential tensions stemming from divergent motivations. Our experience also highlights the importance of effective communication and goal alignment in team environments.

3.2 Information Asymmetry

Our team recognized the potential impact of information asymmetry, a phenomenon where certain team members possess more knowledge or data than others, influencing decision-making and coordination within the team. This asymmetry could have significantly affected critical decision points throughout the simulation, particularly in areas such as weather calculation, route planning (including the Hillary Step), and monitoring health conditions. Research by Bergh et al. (2016) further describes the effect of information asymmetry with private information, different information, hidden information leading to opportunism, lack of perfect information, and information impactedness. In this simulation, the most common types of asymmetries were private information and lack of perfect information.

For instance, 'different information' asymmetry was pronounced during the weather assessment. Team members with access to detailed weather reports may have possessed more accurate and timely information regarding changing weather conditions on the mountain. This information disparity could have influenced decisions on when to proceed with the ascent, where to establish camps, or whether to initiate a summit attempt, impacting overall team strategy and safety.

Similarly, at the Hillary Step—a technically challenging section near the summit—information asymmetry regarding route conditions and climbing techniques was critical. Lack of perfect information affected our team's performance in this part of the challenge.

Furthermore, information asymmetry significantly impacted the monitoring of health conditions among team members during the Everest climbing challenge simulation. Only some team members possessed unique knowledge of symptoms associated with different health conditions, such as altitude sickness or frostbite, which enabled them to assess and address potential risks more effectively. This information disparity had notable implications for decisions regarding rest periods, hydration strategies, and the necessity of medical interventions, ultimately influencing overall team well-being and performance throughout the expedition, underscoring the importance of transparent communication and collaboration in managing health risks and optimizing the team's collective response to challenging conditions at high altitudes.

To mitigate potential challenges associated with information asymmetry, our team encouraged open communication channels and regular team briefings to ensure that relevant information was shared and discussed among all team members. By fostering a culture of information-sharing and collective problem-solving, we aimed to leverage diverse perspectives and expertise to make informed decisions and navigate challenges effectively.

3.3 Effects of Common Information Bias and Discussion Bias

Our team encountered potential influences from cognitive biases such as the common information effect and discussion bias, which could have affected our decision-making process. The common information effect, where teams tend to prioritize shared information over unique insights from individual members, could have limited our consideration of alternative perspectives or critical details essential for making well-rounded decisions. Research by Mancuso et al. suggests that teams tend to overvalue incorrect information early on in the task and it leads to confirmation bias which further strengthens common information bias. In our

case, it was a similar situation especially in the beginning when each of us had different sets of information.

Additionally, discussion bias, where dominant voices or opinions within a team disproportionately influence decision-making, could have potentially affected our group dynamics. To counteract this bias, we sought input from all members before arriving at a decision, and actively encouraged quieter team members to voice their opinions and analysis of the situation, ensuring that decisions were based on a comprehensive evaluation of all available information, mitigating potential influence of discussion bias on our decision-making process.

While our team may not have been explicitly aware of these cognitive biases at the time, our efforts to promote inclusive communication and balanced participation inadvertently helped mitigate the impacts of the common information effect and discussion bias. For instance, instead of solely focusing on commonly shared information, we consciously encouraged all team members to contribute their unique insights and perspectives during discussions. This inclusive approach ensured that diverse viewpoints were considered, reducing the risk of overlooking valuable information that could influence our decisions.

3.4 Team Effectiveness & Leader Effectiveness

We believe that the efforts discussed in Subsection 3.3 were well reflected in the team effectiveness graph (Figure 1, Appendix), which shows how a group of people can collaborate to achieve more collectively than they would individually. Even though we did not finish first in the simulation, our strategy proved to be the most effective as a team. The "winning" team may have been slightly less effective as a whole, but they also accomplished more individual goals if we analyze individual diagrams. This fact prompts us to reflect on the following dilemma: to what

extent should the team be valued in order to achieve goals efficiently, as we observe a conflict between individuality and collectivity. Looking at the leader effectiveness graph (Figure 2, Appendix), we can see that, despite having a 63% goal efficiency compared to team 5's 87% goal efficiency, we have the same leader effectiveness. This demonstrates that leader success is judged by how well the team collaborated and performed well together. However, the difference between 87% and 63% is nearly 25%, which shows the importance of balancing individual and collective goals. As a result, determining how much importance should be accorded to our own individual goals was an important issue during the simulation. Hence, we can say that we overlooked the individual aspect of the simulation, which affected our goal efficiency and is also part of the overall team goals.

3.5 Assigned vs Emergent Leadership

Another inherent aspect of the simulation was that some roles naturally had more leadership influence due to their position, but others had to exhibit leadership despite not being assigned a leadership position. For example, the healer or team leader had more influence on the group because of their crucial abilities to heal a teammate or to submit the ultimate team decision at the end of each day. These essential powers necessarily affected the team dynamics around the table, as they already possessed a type of innate leadership.. This idea can be linked to the concepts of assigned leadership and emergent leadership; in this simulation, the healer and the leader benefited from assigned leadership, while the photographer, the marathoner and the environmentalist were more prone to emergent leadership. Furthermore, those with greater scores for personal goals were viewed as more "important," influencing the decision-making process. For instance, the team leader would never have been jeopardized since he had personal goals that

accounted for more than 10 points. This fact further accentuated the assigned vs emergent leadership dynamics within the team, since some people were viewed as more "important" due to their points and objectives.

3.6 Cognitive Conflicts

Another team-process-related issue that we encountered was too little task conflict as suggested by Figure 3 (refer Appendix), as we all focused on promoting a great team experience and avoiding disagreements. Since too little task conflict can be dysfunctional and can lead to low team performance, our team did not benefit as much as we could have from cognitive conflict, which helps assess problems, expose assumptions, evaluate other options, identify solutions, and increase understanding. Indeed, we could have cognitively challenged more others' perspectives and ideas, which would have been better to come up with well-rounded solutions and enhance team performance. According to an article from Harvard Business Review titled "Why we should be disagreeing more at work", working through cognitive conflicts with the people around you can bring you closer to them and help you understand what is important to them and how they like to collaborate, which leads to improved relationships. Cognitive conflicts can also lead to higher job satisfaction according to the same article, since not being afraid to constructively argue about topics at work could mean that you feel happy and comfortable in this environment (Gallo, 2018).

4. Implications and Conclusion

Our team succeeded relatively well in the Everest Simulation. We managed to avoid challenges such as interest and information asymmetry through openness and communication. However,

through analyzing our team dynamics, process, and behaviors, we identified points of improvement that would further increase our team's effectiveness.

4.1 Implications

Our style of teamwork emphasized being democratic and consensus-driven. It allowed us to avoid conflicts and maintain good social relationships within the team. On the other hand, being so strongly relationship-focused may have been the root cause of many of the areas of improvement we identified, such as a slow decision-making process. While being inclusive and giving all group members a chance to impact the decisions is generally a sign of fair team work, delegating smaller decisions to a single person or a smaller part of the group would have been more effective. Furthermore, research suggests that task conflict may be related to innovation and better decision-making (De Dreu, 2006). In their study, De Dreu found that task conflict is related to team effectiveness in a curvilinear fashion: too little or too much conflict is ineffective. Therefore, to further improve our teamwork, the group should not focus solely on avoiding all conflicts altogether but instead be open to some task conflict when making decisions.

4.2 Conclusion

In conclusion, our team's participation in the Everest Simulation demonstrated the effectiveness of our democratic and consensus-driven teamwork style in fostering collaboration and maintaining positive social dynamics. However, by balancing inclusivity with efficiency and being open to constructive task conflict, our team work would be further improved.

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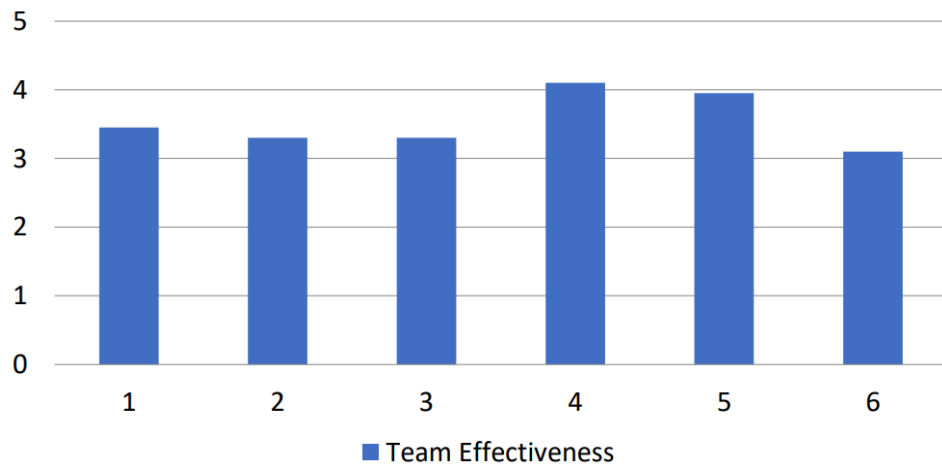
Appendix

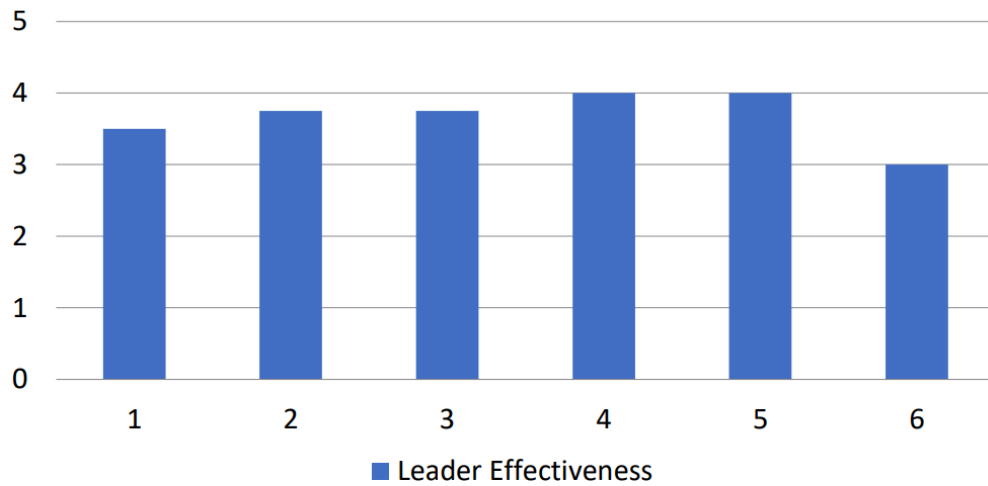*Figure 1: Team Effectiveness Graph of Entire BU5642 Class*

Figure 2: Leader Effectiveness Graph of Entire BU5642 Class

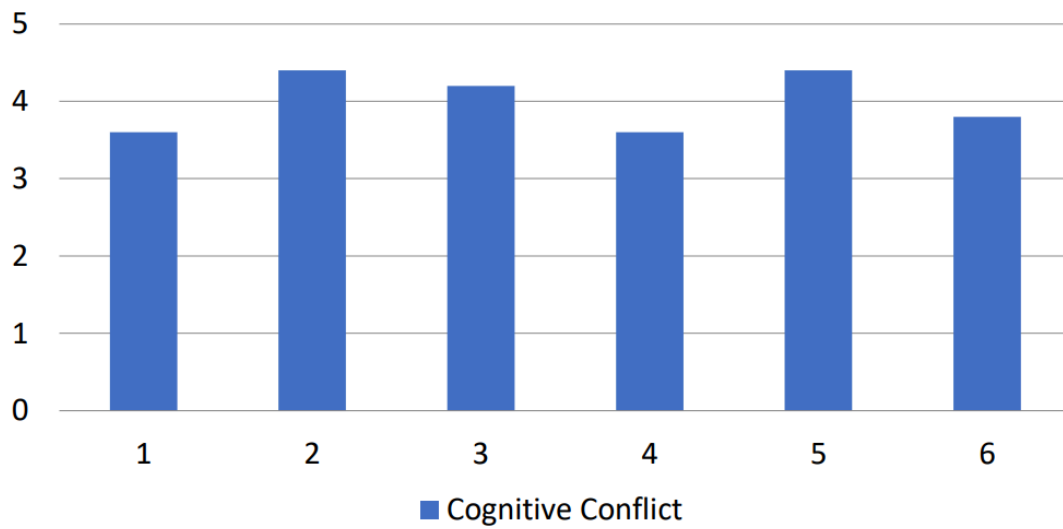*Figure 3: Cognitive Conflict Graph of Entire BU5642 Class*

Video: 7 Travel tips for "Climbing" Mt. Everest