

Title: Motivational Theories in Action: Airplanes and Anagrams

Abstract (100 words): Students often struggle to distinguish motivational theories from each other and appropriately apply them to novel situations. This session demonstrates a 30-minute class activity that helps students solidify different motivational theories covered in a course. Originally designed as an in-person class activity with airplanes, the framework has an adaptation for online classes using anagrams. During this interactive session, participants will complete the team activity, discuss the main learning objectives and key teachable moments, and leave equipped to integrate the activity into any course that covers motivation.

Keywords: Motivation, Goal Setting, Online Experiential Learning

Introduction

With numerous foundational motivation theories covered in an organizational behavior course, students often struggle to distinguish one theory from another and appropriately apply them to novel situations. Using an experiential activity in which students must motivate their team members based on an assigned theory, I crafted a 30-minute lesson plan that helps students solidify the different theories covered in the course. Originally designed as an in-person class activity, I have also adapted this framework for online classes. I have successfully used the framework in undergraduate as well as MBA courses covering motivation in the workplace, as the setup permits flexibility in size of groups, number of theories covered, and variety of rewards.

Theoretical Foundation and Teaching Implications

Motivation in the workplace is extensively researched, with Latham and Pinder (2005) summarizing the literature and concluding that “nomological nets related to work motivation constructs are thicker and tighter than ever” (507). With foundational historic theories and contemporary extensions that focus on cognition, needs, and context, teaching students how to understand and apply motivational theories is challenging, despite student interest being generally high when it comes to the topic. I have utilized mini-cases for students to practice generating ways to improve motivation in individuals or teams while requiring them to specify which motivational theory (or theories) would suggest their tactic would work. Often, however, students overly rely on the default of extrinsic motivation through rewards, typically monetary incentives even if the exercise explicitly precludes offering these as a primary solution. They tend to avoid more complex motivational theories that consider affect or individual needs. Additionally, vignettes limit the behavioral practice of delivering motivational techniques and

receiving feedback from the people being motivated. Thus, I crafted a team exercise that requires a) the student leader to focus on applying one assigned motivational theory, b) the team members to discern what motivational theory most aligned with their leader's approach, and c) the full team to reflect on the affective and behavioral outcomes of the motivational techniques.

Learning Objectives

The activity should be used as a culminating experience after all motivational theories have been covered in class lectures or readings. For the best results, students should have encountered concrete descriptions of each motivational theory that the professor includes in the activity. After participating in the exercise, students will be able to:

- Articulate specific components of at least one motivational theory
- Compare and contrast their motivational theory with at least two other theories
- Evaluate how they respond to the motivational approach, affectively and behaviorally
- Identify practical pitfalls that may occur when applying the theory to a team task

Exercise Overview

This activity can be deployed in-person as the Airplanes Challenge or online as the Anagram Challenge. First, I will describe the Airplanes Challenge. I set aside 30 minutes for the entirety of the exercise, including the ending debrief. I prepare 10 sheets of paper per team, a tape measure, tape, a stopwatch, and rewards (candy, bottled coffee, or extra credit points). Students should be pre-sorted into teams of four to six students before the class session begins for expediency. (This can be done by assigning numbers as students arrive, using existing teams in the course, or grouping based on physical proximity.) Specify a leader for each team. In small courses, I handpick each student leader for growth opportunities; in larger sections, I specify the person whose name is last alphabetically, has a birthday closest to today, or is sitting closest to

the door. The class is told that their team's objective is to land a paper airplane on a target outside the classroom. Each team will get two attempts, and the group who lands an airplane closest to the target wins. Importantly, I emphasize that the two attempts are not averaged; the closest single-trial wins. I then ask the leaders to step outside the classroom with me for their team's materials.

Once outside the classroom, I provide the leaders with their assigned theory (see Appendix A). While I typically use 5 theories, this number can be increased or decreased as desired: If you have more teams than theories you plan to use, it is fine to have multiple teams with the same motivational theory and even provides an interesting point of contrast during the debriefing. The assignment slips can include a few notes about each theory if you are concerned the student leaders may not have their own notes on the topic. I give each leader 10 sheets of paper for their team to construct airplanes and remind them that they may choose to distribute the paper to their team members consistent with their motivational theory. After answering any questions the leaders have, we return to the classroom. I inform the class that they have 4 minutes to plan with their leader, who will provide guidance but not be able to directly construct nor throw the airplanes. I warn all groups they should be prepared to make their first attempt in exactly 4 minutes and that they will have a limited window of time to step outside and fly their airplane once they are called. (Typically, I use 45 seconds, but more or less time can be used depending on the size of the classroom or number of teams.) I begin my stopwatch countdown from 4 minutes. While the leaders motivate their teams, I step outside the classroom to place the target, which can be a sheet of paper with a circle in the middle or a dry eraser. I tape the target to the floor to ensure it will not move if hit by an airplane or wayward passerby and mark a

throwing point about 8 meters away. Ideally, students should be able to fall short of the target or to overshoot, so I avoid placing the target too close to a wall.

When the 4 minutes have passed, I call a group and inform them they have 45 seconds to step outside and make their first attempt. I instruct the other groups to be ready when they are called. Typically, teams have an airplane prepared but have not necessarily determined who will throw. The team is often surprised at how nervous they are for the first attempt, and it feels rushed. Whether the first attempt yields a close landing to the target or one far away, I remind the students that the closest single throw is the one that wins. I measure the distance from the plane to the center of the target with the tape measure, share the measurement with the team, and then return to the classroom to call the next team, resetting the 45 second timer. If a team requests feedback as to how they are doing, I do not provide any other than the precise distance I recorded. They often want to know if they are currently closest or furthest, but it is important for them to only have their team's distance.

If the class section is particularly large, teaching assistants or a student assistant can be used to run two teams at a time for expediency. After each team has completed their first attempt, I cycle through all teams again for their second attempt. Once all teams have completed both attempts, I remove the target from the hallway and begin debriefing.

Some student teams are typically more eager to hear who won than others. I do not reveal immediately which team won. Instead, I ask the teams who are requesting the results why they are so motivated to know the outcome. This reminder of the course topic generally restores some semblance of order and studious attention to the room. (The classroom atmosphere during the activity is typically energetic, with most students out of their seats and test flights occurring in the classroom while teams are completing recorded attempts outside.) Often, the students asking

are those who believe they have won and are eager to show their competence. If you have covered goal orientation, it is worth identifying this performance orientation to the class. Other students are curious because their leader made them aware of the reward for winning; some teams, notably the one assigned to intrinsic motivation, may be surprised there is an external reward. At this point, I inform the students that their leader was instructed to use a specific motivational theory during the activity to motivate the team and ask the members to come to a consensus on which one it was, with leaders to remain silent during the deliberation. I provide the list of potential theories and ask students to list at least two reasons why they choose a particular theory. They provide this feedback to the leaders, who may then confirm or deny the conclusion. Within 2 to 3 minutes, usually all groups have correctly identified their leader's motivational theory. Depending on the size of the class, one group from each theory shares their conclusion and evidence with the rest of the room, or I have groups share their conclusions with a neighboring team. At a minimum, I request one group that feels their leader demonstrated their motivational theory exceptionally well to kindly brag on them to the class. This ensures that a well-applied motivational technique is salient to the full class and enhances a class culture of support.

I prompt the students to consider why I measured the distance rather than putting down markers and why I refused to share other teams' results during the activity. Students realize this would give an advantage to later teams according to goal setting theory, allowing them to better benchmark realistic goals and enhance their motivation.

Finally, I ask students to reflect on their affective reaction to the motivational techniques used by their leader and discuss obstacles to deploying this motivational theory in a group setting. Leaders are encouraged to share what felt challenging to them, and this is typically met

with strong social support from team members and formative feedback. At the end of the debrief, I reveal the results and the rewards for the leader to distribute to the team members and conclude the class session.

To adapt this activity to an online class, I crafted the Anagram Challenge. Instead of building airplanes, teams generate as many 3+ letter words as they can from a scrambled word in 60 seconds. The team receives a point for each unique word they generate and a 5-point bonus if they generate the longest word of the round. They have two rounds, and the highest total count for a single round wins. Team size can vary from four to as many as ten in an online environment. I prepare a shared online document for each team ahead of time, in which they can record their answers when the first trial begins, and I keep the documents open on my screen for easy tabulation at the end of a round. I send teams to their breakout rooms and ask the assigned team leaders to stay in the main room for further instructions. They receive their assigned motivational theory and then have 4 minutes to motivate their team accordingly. After the first round ends, teams have 2 minutes to strategize before the final round, giving leaders another opportunity to motivate according to their theory.

Session Description

For the opening 5 minutes of the session, I will explain my motivation for generating the activity and solicit which motivational theories the audience members enjoy covering in their courses, anticipating upwards of four distinct theories will be named. I will ensure attendees have a basic understanding of each of the theories and then conduct the entirety of the Airplanes Challenge described above with the participants as team members, using the theories they supplied in the activity. During the debriefing segment, I will expound upon the more interesting iterations I have experienced running this activity over the years. Participants will receive a

handout to help them replicate the activity in their courses (Appendix B). We will discuss the online adaptation and have 10 minutes for Q&A.

References

- Latham, G. P. & Pinder, C. C. (2005). Work motivation theory and research at the dawn of the Twenty-First century. *Annual Review of Psychology*, 56, 485 – 516.

Appendix A

Your job is to motivate your team toward successful performance (landing the airplane closest to the target). You must try to motivate them using concepts from the following theory:

GOAL-SETTING THEORY

Think of things you can say to motivate your team under this theory. Try to motivate them multiple times as they work on the task, not just one time at the beginning.

There will be 5 pieces of candy given to you if your team wins. As the leader, you will get to determine how to distribute the pay (candy). **It is up to you whether you reveal any of the following to them at this time:**

- a) There is candy to be won
- b) You get to decide who gets what
- c) Your plan for deciding who will how much

PLEASE CONSIDER YOUR MOTIVATIONAL THEORY and what is most consistent with it before deciding how much to tell them and when to tell them.

Your job is to motivate your team toward successful performance (landing the airplane closest to the target). You must try to motivate them using concepts from the following:

MASLOW'S HIERARCHY OF NEEDS

Think of things you can say to motivate your team under this theory. Try to motivate them multiple times as they work on the task, not just one time at the beginning.

There will be 5 pieces of candy given to you if your team wins. As the leader, you will get to determine how to distribute the pay (candy). **It is up to you whether you reveal any of the following to them at this time:**

- a) There is candy to be won
- b) You get to decide who gets what
- c) Your plan for deciding who will how much

PLEASE CONSIDER YOUR MOTIVATIONAL THEORY and what is most consistent with it before deciding how much to tell them and when to tell them.

Your job is to motivate your team toward successful performance (landing the airplane closest to the target). You must try to motivate them using concepts from the following theory:

EXPECTANCY THEORY

Think of things you can say to motivate your team under this theory. Try to motivate them multiple times as they work on the task, not just one time at the beginning.

There will be 5 pieces of candy given to you if your team wins. As the leader, you will get to determine how to distribute the pay (candy). **It is up to you whether you reveal any of the following to them at this time:**

- a) There is candy to be won
- b) You get to decide who gets what
- c) Your plan for deciding who will how much

PLEASE CONSIDER YOUR MOTIVATIONAL THEORY and what is most consistent with it before deciding how much to tell them and when to tell them.

Appendix A

Your job is to motivate your team toward successful performance (landing the airplane closest to the target). You must try to motivate them using concepts from the following theory:

EQUITY THEORY

Think of things you can say to motivate your team under this theory. Try to motivate them multiple times as they work on the task, not just one time at the beginning.

There will be 5 pieces of candy given to you if your team wins. As the leader, you will get to determine how to distribute the pay (candy). **It is up to you whether you reveal any of the following to them at this time:**

- a) There is candy to be won
- b) You get to decide who gets what
- c) Your plan for deciding who will how much

PLEASE CONSIDER YOUR MOTIVATIONAL THEORY and what is most consistent with it before deciding how much to tell them and when to tell them.

Your job is to motivate your team toward successful performance (landing the airplane closest to the target). You must try to motivate them using concepts from the following theory:

INTRINSIC MOTIVATION

Think of things you can say to motivate your team under this theory. Try to motivate them multiple times as they work on the task, not just one time at the beginning.

There will be 5 pieces of candy given to you if your team wins. As the leader, you will get to determine how to distribute the pay (candy). **It is up to you whether you reveal any of the following to them at this time:**

- a) There is candy to be won
- b) You get to decide who gets what
- c) Your plan for deciding who will how much

PLEASE CONSIDER YOUR MOTIVATIONAL THEORY and what is most consistent with it before deciding how much to tell them and when to tell them.

Appendix B

Motivational Theories in Action: Airplanes Challenge Instructor's Guide

Time: 30 minutes minimum

Materials Needed:

- 10 sheets of paper per team (4 – 6 students per team)
- Tape measure
- Tape
- Stopwatch
- Rewards (candy, coffee, or extra credit points)
- Team leader instruction slips for distribution (Appendix A)

Procedures (approximately 20 minutes):

1. Assign teams of 4 – 6 students at the start of class. Specify a leader for each team.
2. Provide clear instructions to the class on the board/slide:
 - a. Objective: Land a paper airplane on a target
 - b. Each team will get two attempts
 - c. Team who gets closest to the target wins (single attempt, not averaged)
 - d. Leaders can provide guidance but may not construct nor throw any airplanes
3. Outside the classroom, distribute team leader instruction slips and 10 sheets of paper to each team leader. Ensure leaders understand their assigned motivational theory.
4. Give class 4 minutes to strategize, emphasizing they must be ready to throw their first attempt when called and will have limited time to do so. Set stopwatch for 4 minutes.
5. Tape target (paper or dry eraser) to floor outside the classroom and mark throwing line approximately 8 meters away. Leave space for overshooting the target.
6. When the stopwatch goes off, call the first group and inform the class groups will have 45 seconds to make their throw once called.
7. Measure distance from the edge of the airplane to the center of the target. Tell the team the distance you record (e.g. 76 centimeters) but do not provide additional feedback.
8. After each team has completed two attempts, remove the target and begin debriefing.

Debrief (approximately 10 minutes):

- Team members: Which motivation theory do you think your leader was assigned and why? Come to a consensus with two reasons why you selected the theory.
- Leaders: Provide feedback after consensus is reached, along with insights as to what techniques you tried to motivate your team according to your assigned theory.
- Have groups share conclusions with a neighboring group or with the class at large.
- Team members, how did it feel to be motivated via this theory? Leaders, how did it feel to use this theory to motivate others? What obstacles did the leader face deploying the theory in a group setting?
- Why did I measure rather than put down markers on the floor? Why did I not share other groups' progress with you during the activity? [Answer: Would give later groups an advantage] Which motivational theory explains why this information would have been an advantage? [Goal setting theory – benchmarking with historical data, allow you to make more specific and attainable goals]
- Reveal winning team and allow leader to distribute the rewards.

Appendix B
Motivational Theories in Action: Anagrams Challenge
Instructor's Guide for an Online Class

Time: 30 minutes minimum

Materials Needed:

- Shared online documents set up (Google Docs/Microsoft Word online), one per team
- Rewards (extra credit points or homework passes)
- Breakout rooms in an online classroom platform

Procedures (approximately 20 minutes):

1. Assign teams of 4 – 10 students at the start of class. Keep teams as even as possible since more team members is an advantage in this exercise. Specify a leader for each team.
2. Provide clear instructions to the class on a digital slide or in the chat box:
 - a. Objective: Generate as many 3+ letter words as possible in 60 seconds from a large scrambled word
 - b. There will be two rounds (different words)
 - c. Teams receive a point for each unique word generated. An additional 5 bonus points will be given for the longest word generated in a given round.
 - d. The team who gets the highest score in a single round wins (single attempt, not averaged).
 - e. Leaders can provide guidance but may not contribute words during the rounds.
3. Send students to their breakout rooms while asking team leaders to remain in the primary online classroom. Assign a specific motivational theory to each leader. Ensure leaders understand their assigned motivational theory before sending them to their breakout rooms, letting them know they have 4 minutes to motivate prior to the start.
4. After 4 minutes, broadcast the first scrambled word. (ehienatcvem - Achievement)
5. Monitor the online documents and close the breakout rooms after 60 seconds to end the round. Explain the first round is over, no more words can be added to their total, and you are scoring their submissions. Tell leaders they have approximately 2 minutes to strategize with their team before you will broadcast the second scrambled word. Send everyone back to their breakout rooms.
6. Write the scores for each group in their document. After 2 minutes, broadcast the second scrambled word. (taiocalzniat - Actualization)
7. Close the breakout rooms after 60 seconds to end the round. Provide the class with the first two debriefing questions to discuss in their breakout rooms while you tally the scores and determine the overall highest score in for a single round (and thus, the winner).

Debrief (approximately 10 minutes):

- Team members: Which motivation theory do you think your leader was assigned and why? Come to a consensus with two reasons why you selected the theory.
- Leaders: Provide feedback after consensus is reached, along with insights as to what techniques you tried to motivate your team according to your assigned theory.
- Team members, how did it feel to be motivated via this theory? Leaders, how did it feel to use this theory to motivate others?
- Why did I not share other groups' progress with you during the activity? Why did I not average the two rounds? [Demotivational if did not do well on the first round. Reduced self-efficacy if a group knew they did relatively poorly.]
- Reveal winning team and allow leader to distribute the rewards.