



S-420 Unit 10: Critical Thinking and Decision-Making

Summary:

Good decision-making skills require the ability to examine our own beliefs about the way we think. Individuals must be willing to open their minds to different methods of critical analysis and decision-making.

Objectives:

Students will be able to:

- Demonstrate the ability to think critically.
- Demonstrate decision-making skills that promote better decision-making in a team environment.

Unit at a Glance:

Topics	Method	Duration
Critical Thinking	Presentation	30 Minutes
Decision-Making	Presentation, Videos, and Exercise	1 Hour
Total Unit Duration		1 Hour 30 Minutes

Materials:

- Ability to display images and video on large screen.
- White board or easel access for group breakout.
- 4x6 index cards (1 per student).

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Objectives

Students will be able to:

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- Demonstrate decision-making skills that promote better decision-making in a team environment.

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- Review unit objectives.

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Critical Thinking

What is Critical Thinking?

*“Too often we... enjoy the comfort of opinion
without the discomfort of thought.”*

– John F. Kennedy

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- Critical thinking is the process of analyzing and assessing one’s own thinking with the goal of improving it. The ability to think about thinking.
- Critical thinking does not come naturally to most of us. We have to train ourselves to think critically.
- Barriers to critical thinking include:
 - Egocentric thinking
 - Social conditioning
 - Biases
 - Schedule pressures
 - Group think
 - Arrogance, etc

Discussion

- Discuss how different barriers come into play in different circumstances.
- Discuss signs that one of these barriers might be impeding critical thinking.

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Why is Critical Thinking Important?

- Promotes in the gathering and assessing of relevant information.
- Leads to well-reasoned conclusions and solutions.
- Helps establish open-minded processes of thought.
- Leads to personal growth.

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How to Stimulate Critical Thinking

To critically analyze thinking, one must question one's own thinking and assumptions. We often believe our assumptions are the truth.

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Note to Instructor

Tie this back to the class discussion about assumptions in Unit 4: Communications.

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How to Stimulate Critical Thinking

Ask yourself the following questions:

- Do I understand the question or the problem? What is the goal or objective and how is it different from other goals?
- What information do I need? Is the information accurate and relevant?
- What assumptions am I making and what am I taking for granted?
- Did I explore all points of view? What points of view do others have?
- What are the implications and consequences?

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How to Stimulate Critical Thinking

A leader can promote critical thinking within a team by:

- Creating a positive team climate.
- Utilizing open planning.
- Encouraging innovation.
- Discussing past decisions and identify the criteria and values that lead to those decisions.

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Discussion

- Share an example of how critical thinking assumptions can help affect the functioning of Command and General Staff (C&G). For example, how a team member's assumptions about different agencies or different C&G positions affected the team.

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Decision-Making

What is Decision-Making?

Decision-making is the process of sufficiently reducing uncertainty and doubt about alternatives to allow a reasonable choice to be made.

Decision-making is about determining how much risk someone is willing to live with.

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Discussion

- Share a story about a common every day decision and the risk that may be involved (for example, what route to take to work) to highlight the point that decision-making is about determining how much risk someone is willing to live with.

Question: What goes into decision-making?

Possible Answers: Risk, probability, consensus, time sensitivity, policy, etc.

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What are Barriers to Decision-Making?

- Group think
- Biases
- Improper framing
- Uncertainty
- Complexity
- High stress environments
- Work conditions
- Pressure to perform
- Reputation
- Fear and fatigue
- Time of year

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- We all like to think we are logical about decision-making – that we look at alternatives and options and weigh risks; however, we probably do not do this as often as we think. It is important to recognize there are barriers that affect one's own decision-making and team decision-making.

Note to Instructor

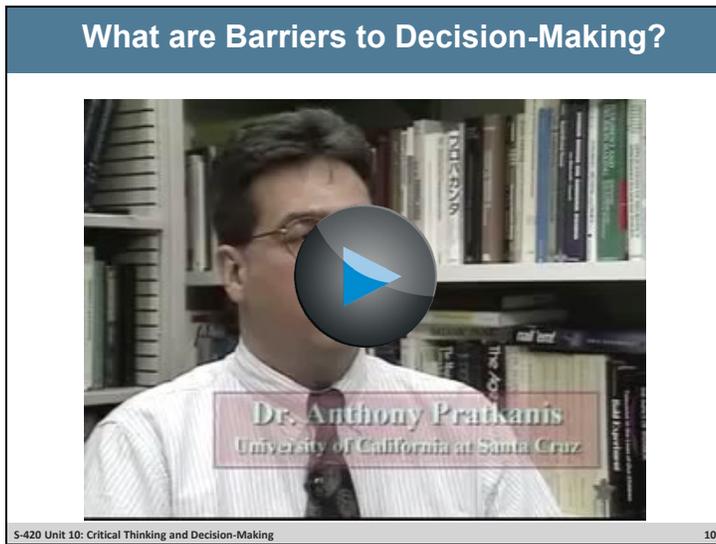
Group think is an important barrier for students to be aware of. The next video is about group think/conformity.

Bias is another important barrier for students to be aware of. Biases are not necessarily bad. However, it is important to be aware of them – we all have them. Examples of biases include:

- Anchoring bias (the first way of learning something is obviously doctrine and anything learned latter is wrong).
- Overconfidence bias (positive self-assessment).
- Confirmation bias (the tendency to gather and focus on information that supports our current position).

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❑ Play Video

Title Group Think

Time (2:40)

Audio

Post-Video Discussion (5 minutes)

Purpose: To show how group thinking or conformity can affect a team.

- Do you think conformity thinking can happen on your team?
- How can you lessen the likelihood of conformity thinking?

Possible Answers: A positive team climate makes it safe to express opinions.

[This question helps transition to the next section on mitigating the barriers.]

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How to Mitigate Barriers to Decision-Making

- Awareness of the barriers is not enough: an individual and the team has to mitigate the barriers to make better decisions.
- How can a team mitigate the barriers?

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Question: How can a team mitigate the barriers?

Possible Answers:

- Create a positive team climate.
- Have diversity in the team.
- Conduct after action reviews (AARs) to discuss the decision-making process and what barriers came into the process.
- Bring in an outsider to assess the team's decision-making process.

Exercise: Biases are like Wearing Blinders Activity (2 minutes)

Purpose: To demonstrate that when we are looking for something in particular – it is like wearing blinders because we do not see everything else that is there.

- Tell students to look around the room and create a mental list of everything that is GREEN. Do not write it down. Give them about 30 seconds to do this.
- Then, tell students to write down everything in the room that is BLUE.
- Discuss what happened. That when we are looking for something in particular – such as everything GREEN – we do not see everything else; it is like wearing blinders.

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Decision-Making Styles

Analytical Decision-Making Style

- What are examples of analytical decision-making?
- What are strengths?
- What are weaknesses?

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- People have different decision-making styles, such as analytical and intuitive, and these styles have strengths and weaknesses.

Question: What are examples of analytical decision-making?

Answer: Using data to solve problem.

Question: What are strengths?

Answer: Best way to deal with bigger complex problems because you can break the problem down into parts.

Question: What are weaknesses?

Answer: It takes more time.

- Even when dealing with facts some uncertainty will exist (e.g., Heisenberg uncertainty principle states that the position and the velocity of an object cannot both be measured exactly, at the same time, even in theory.)
- Decisions are not necessarily based on the data; because decisions are made based on the *value* a person places on the facts.
- Value-based decisions are *not* founded on the facts. Two people can hear the same facts but reach different conclusions because we attribute value to the facts. If facts were valueless, two people with the same information would make the same decision (for example capital punishment). It is not the facts that drive us to the decision, it is the value we place on it.
- This is where team values have a role in decision-making: values give the team a framework to make decision.

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Decision-Making Styles

Intuitive Decision-Making Style

- What are examples of intuitive decision-making?
- What are strengths?
- What are weaknesses?

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Question: What are examples of intuitive decision-making?

Answer: Gut feelings, pattern recognition, experience-based.

Question: What are strengths?

Answer: Best used when someone has a lot of experience and knowledge in the area.

Question: What are weaknesses?

Answer: The gut isn't always right. Experience is invaluable but it can be fallible.

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Decision-Making Styles

How can you improve intuitive decision-making?

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Question: How can you improve intuitive decision-making?

Answers:

- Get more experience.
- Look for pattern recognition and for what is different in the situation; the situation is always changing (Heisenberg Uncertainty Principle).
- Reflect on past decisions.

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Decision-Making Methods

Authoritative

- What is it?
- What is an advantage?
- What is a disadvantage?
- When would this be a good method for C&G?

Democratic

- What is it?
- What is an advantage?
- What is a disadvantage?
- When would this be a good method for C&G?

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Authoritative

- What is it?
- The leader or manager makes the decision. Decision handed to team without a discussion or vote.
- What is an advantage?
- Quick.
- What is a disadvantage?
- No input, limited buy-in.
- When would this be a good method for C&G?

Democratic

- What is it?
- Group decision, vote.
- What is an advantage?
- Empowerment, more inputs, majority supports.
- What is a disadvantage?
- Winners/losers, may not have consensus.
- When would this be a good method for C&G?

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Decision-Making Methods

Consensus

- What is it?
- What is an advantage?
- What is a disadvantage?
- When would this be a good method for C&G?

Default

- What is it?
- What is an advantage?
- What is a disadvantage?
- When would this be a good method for C&G?

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Consensus

- What is it? Team members make the decision – everyone must agree.
- What is an advantage? Variety of input and perspectives; team members generally support the decision.
- What is a disadvantage? Time consuming.
- When would this be a good method for C&G?

Default

- What is it? Defaulting or delegating the decision to someone else.
- What is an advantage? Trust.
- What is a disadvantage? Person making the decision may not be clear about the direction; perception of aloofness, favoritism.
- When would this be a good method for C&G? When there is a need for an expert opinion such as defaulting to the fire behavior analyst.

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Personal Decision Making Style Activity

Examples of Descriptive Terms:

- Reflective
- Systematic
- Resourceful
- Decisive
- Safety oriented
- Hurried
- Structured
- Adaptive
- Hesitant
- Seek input
- Measured
- Apprehensive
- Receptive

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Exercise: Personal Decision-Making Style Activity (30 minutes)

Purpose: To explore one's own decision-making tendencies.

- Pass out a 4 x 6 card to each student.
- Introduce the activity:

Question: Do most of you agree that decision-making is a skill that leaders need to have to be a good decision maker?

Question: Have you ever thought about your own decision-making style? Most people think it is an important skill yet we do not think about our own decision-making style.

- This activity has two parts: you explore your own style and then share it with the team. It is good to know how team members make decisions.

Part 1. You have five minutes to write three to five descriptive terms that describe your decision-making style or how you would finish this sentence "When making decisions, I tend to be...".

Examples of descriptive terms include:

Part 2. Each team member has 3 minutes to share descriptive terms with other team members and share stories about why he/she selected the terms. This will help the team members understand each other's decision-making process.

- Facilitate a classroom discussion about what the students' learned about themselves and about their team members.

Question: What did you learn about your own decision-making style?

Question: What did you learn about other team members' decision-making styles?

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Decision-Making Processes

- Risk Management Process (IRPG)
- Incident Management Planning Process
- Wildland Fire Decision Support System (WFDSS)

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- In wildland fire, there are several decision-making processes that are used, such as
 - the Risk Management Process (IRPG),
 - Incident Management Planning Processes,
 - Wildland Fire Decision Support System (WFDSS).
- Incident Management Teams need a decision-making system or process to help them make decisions.

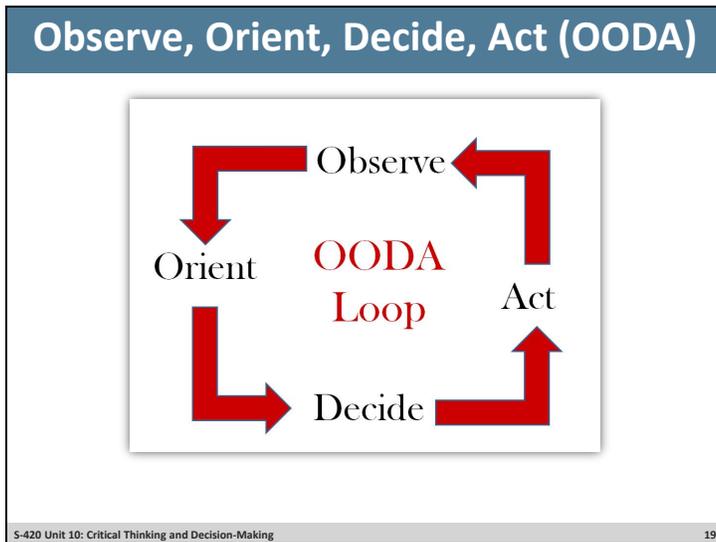
Note to Instructor

This course uses the Observe, Orient, Decide, Act (OODA Loop) as an example of a decision-making process.

The cadre can select other decision-making processes to discuss.

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- A process that provides the structure necessary to remain proactive in decision-making in dynamic environments. Developed for the military by Colonel John Boyd; US Air Force. A number of organizations have adapted this model.
- A four-point decision cycle (not a linear process) where information is fed forward and feedback is continually entered into the cycle.
 - *Observe*: Scan environment for new information, collect information, feed information forward.
 - *Orient*: Analyze information; filter experiences and perceptions; update picture; recognize how values and past experience affect decision-making; feed information forward.
 - *Decide*: Consider options; determine course of action; feed information forward.
 - *Act*: Implement the decision; observe the results; feed information into future decisions and experiences; keep learning.

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Exercise: Decision-Making Video and Discussion (15 minutes):

Purpose: To introduce a different decision-making process. (Another way of looking at decision-making in a team setting.)

Play Video

Title Inno-Versity Presents: Greatness

Summary Drawn animation story telling on the topic of leadership.

Time (09:48)

Audio

Facilitate a class discussion.

Question: What are the take-away points?

Possible Answers:

Empower people.

Get the team climate right.

Communicate intent.

Ownership.

Effective communication.

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Objectives

Students will be able to:

- Demonstrate the ability to think critically.
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- Review unit objectives.