
UNITED STATES MARINE CORPS
THE BASIC SCHOOL
MARINE CORPS TRAINING COMMAND
CAMP BARRETT, VIRGINIA 22134-5019

DECISION MAKING W170001XQ STUDENT HANDOUT

Decision-Making

Introduction and Importance

As Marine Corps Officers, we are primarily decision makers. Our weapon is the unit we command. We decide on a course of action and then clearly communicate that decision to our unit. Our Marines translate that decision into action. As future leaders you will be required to make decisions in combat. You must begin to understand the importance of how you make decisions, and the importance of making risk-based decisions in a time competitive environment.

Prerequisites

MCDP 1 Warfighting, introduced you to the nature of war which is inherently violent and chaotic, which we mitigate through clear communication of intent and simple plans. It discussed maneuver warfare, the theory of which is to strike the enemy's critical vulnerability (the decisive time and place) with massed fires to bend the enemy to our will.

In the **Tactical Fundamentals discussion group**, you learned in depth the Nine Principles of War and the Six Tactical Tenets; evaluative concepts that operate congruently to your tactical planning.

In This Lesson

This lesson gives you a detailed study of how humans make decisions and how understanding the ways we make decisions will allow you to better employ your Marines.

This lesson covers the following topics:

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Decision-Making

Learning ObjectivesTerminal Learning Objective(s)

TBS-CORE-2104 While serving as a leader of Marines, demonstrate the leadership principle "make sound and timely decisions," to support the mission of the Marine Corps and maintain combat readiness.

ENABLING LEARNING OBJECTIVE(S)

TBS-CORE-2104a While serving as a leader of Marines, demonstrate the ability to "decide, communicate and act in the fog of war," to support the mission of the Marine Corps and maintain combat readiness.

TBS-OFF-2102m Given an evaluation, define the two types of decision-making without omission.

TBS-OFF-2102n Given an evaluation, define the steps of the OODA Cycle without omission.

TBS-OFF-2102o Given an evaluation, define small unit leader decision making competencies without omission.

The Importance of Decision-Making

Let's say we are a football team. Consider the commander the quarterback. The week before a game, the team will prepare focusing on the strengths and weaknesses of the opposing team. Because the team has a week to prepare, the preparation process is very deliberate; observing video, past games, and orienting on where they can most effectively defeat the opposing team. They will then decide on the plan to defeat the team and learn and employ that plan through practice sessions during the week.

When it comes time to conduct the game, early in the game our team will observe the opposing team's strategy through the play of the game. With the aid of the coaches, the quarterback will orient on the gaps observed, make decisions before every play, and act on those decisions. In this case, the decision making process is less deliberate than during the preparation the week prior due to the compressed time of the game. Another reason for the increased tempo of decision making is the team realizes that if they do not observe, orient, decide, and act on their opponents quick enough, they will be at a disadvantage throughout the game. If the opposition identifies our weaknesses faster than we identify theirs, they can quickly decrease the risk of our team scoring.

It is now the last two minutes of the final quarter. We need one more score to defeat the opposing team and we have the length of the field to travel. How and why would the quarterback's decision making process change? The answer seems elementary. With only two minutes left, time is now severely compressed. The quarterback must quickly observe the weakness of the defending team, orient on the gaps in that defense, decide on a play, and act on that decision. If the quarterback is too slow in this regard due to over-abundant caution, or takes too long to make a decision and lead the team in its execution, then the time will run out and the game will be lost. In this case, the astute quarterback will assume the risk of acting without long deliberation so as to not run out of time. Additionally, the quarterback will "hurry-up" the team to keep the defense on their heels, hoping to make the opposing team less responsive to the fast tempo play.

Success in combat is similar to our football example. Success becomes determined by a leader's ability to make time competitive decisions, communicate them clearly to his subordinates, and impose his will in order to turn decision into action. *Warfighting* describes all actions in conflict as 'initiative to act' or a 'response to action'. The purpose of making decisions is to adapt our action to the enemy's action, making and acting on effective decisions faster than the enemy in order to exploit fleeting opportunities, gain and maintain the initiative, forcing the enemy to react to our influence. Like the quarterback above, we seek to keep the enemy on their heels and less responsive to our fast tempo execution.

As company grade officers, we operate at the tactical level of warfare. At this level, opponents may frequently observe one another and react more quickly. At our level, the time-critical nature of battlefield decisions is acute.

Decision-Making Stimuli

Decision making is not a Marine Corps phenomenon; you have been making decisions for most of your life. It is important to understand what has unconsciously caused you to make decisions, in order to consciously shape their influence on future decisions. When presented with information, we decide on courses of action based upon three general criteria:

Rational Calculation

We have a natural aversion to uncertainty. We don't like to be wrong. In rational calculation, we try to perfectly predict our results by analyzing and comparing large amounts of data. Frequently we construct matrices and charts to compare different options available. Large staffs of subject matter experts plan using rational calculation. Rational calculation is the foundation of *analytical* decision-making. In many cases rational calculation requires time to accomplish, so we generally see this type of decision making prominently during a preparatory phase. That is not to say it is not used during a conduct or a follow-up phase. In our above example, the week of preparation prior to the game is filled with rational calculation and analytical decision making.

Intuition/Gut Feeling

When making decisions by intuition, we base our actions on what "just feels right" or what we "just know" is the right choice. The driving force behind intuitive decisions is our experience base (available in subconscious and conscious memory) for analysis and comparison. Often we may not recall any experiences similar to our current situation. However, our mind will match the pattern we observe with one we have "on file" and then to predict the most reasonable result. Intuition is the foundation of *recognition* decision-making. In the football example, the quarterback may or may not employ "gut feeling" in varying degrees throughout the game in conjunction with rational calculation.

Emotion

Whether we use rational calculation or intuition, it is important to note that emotions will always play some part in our decision making process. For example, anger might cause a leader to make reckless decisions in haste, but it may also evoke physical courage. Fear or doubt could cause you to further examine a situation and identify a preventable weakness. But, it can also easily lead to hesitation or indecisiveness. The key is to not allow emotion to become the primary stimulus for decision making. As leaders we must be able to harness our emotions, use them to our advantage, and achieve a balanced strength of mind and character.

Two Methods of Decision-Making

In describing the three types of decision making stimuli, we have identified two methods of decision-making; analytical and recognitional. The table below shows when to use each method and their advantages and disadvantages.

Method	Use when time is	Advantages	Disadvantages
Analytical	Not critical	• Can justify decision to others • Manages large amount of information • Relies on subject matter expert contributions • Decision maker can feel as comfortable as possible while dealing with uncertainty	• Time consuming • Requires large amount of information input • Does not develop decision-making abilities of those involved
Recognitional	Critical; during crisis situations	• Requires little time • Requires relatively little current information • Requires less planning time • Leads to increased tempo and increases ability to maintain the initiative against the enemy	• Requires large experience base on the subject before the crisis • Requires moral courage • Decision maker assumes increased risk without group absolution from staff planning

Analytical Decision Making

Analytical Decision Making is the most comprehensive and accurate type of decision making. The reason is the time available allows for a detailed review of the situation which subsequently leads to a decision and resulting action. Your tactical planning classes will take you through the methods and tools we use to conduct an analytical decision making process prior to execution. However, analytical decision making is not limited to the preparation phase of an operation. It continues into the conduct and consolidation phases as well, albeit to a lesser degree due to the nature of those environments.

Recognitional Decision Making

Recognitional decision making or “recognition-primed” decision making is a model of how people make quick, effective decisions when faced with complex situations. It often occurs subconsciously. Recognitional decision making inherently assumes more risk, as less than perfect information is rapidly processed and acted upon. To ensure that unnecessary risk is mitigated during recognitional decision making, training and experience is paramount. Repetitive training, rehearsals, and experience allows for faster recognition of key variables that will drive one towards a particular decision. Take our football example above. During the hurry-up offense, what increases the quarterback’s ability to conduct recognitional decision making and lead the team in that action? The practice during the week’s preparation for the game trains the quarterback to pick up opposing team patterns and subsequent actions faster. There are two types of decision making strategies that we consider “recognition-primed:”

Feature-Matching

The decision-maker identifies that he or she has personally experienced the elements of a given situation. This experience can be a result of past actions, training, or rehearsing a plan. Comparison based on the previous personal experience allows for quicker decision making given the same situation but different time and place.

Reason by Analogy

~~The retrieval of stored information derived from a similar~~ situation. This is a comparison of the elements and results of a similar situation that the decision-maker has previously observed or read about. This usually occurs as a result of past studies. For example, a football player has watched tape of an opponent in preparation for an upcoming game. When the player sees a similar situation emerge, the decision capability increases in speed.

Both types require pattern recognition to occur. We identify patterns based on experiences (Feature-Matching) or by historical references studied (Reason by Analogy). Pattern recognition improves in speed and accuracy the more we experience a certain collection of events. We accomplish this through training.

Decision-Making Variables

In either analytical or recognitional decision making, when faced with the likely prospect of failure amidst a sea of uncertain, vague, and contradictory information, most people are extremely hesitant to make a decision. We tend to forget that the enemy is also facing a similar information shortfall. Understanding the factors that degrade our decision-making ability on the battlefield and realizing that they will never be absent are absolutely vital to relevant decisions in conflict. As leaders, we must guard against waiting for a perfect sight picture, which may never come, leading to inaction. The below variables are those commonly seen in all types of decision making. Understanding these variables allows us to plan and execute in uncertainty although the plan will be less than perfect. This is known as “The 70% Solution.”

Chance	The absence of any cause of events that can be predicted, understood or controlled. No other human activity is subject to chance more than combat. It increases uncertainty and risk.
Risk	This is the expectation that the future holds the possibility of more than one result. It is inherent in every decision as well as indecision.
Information	The sum of all the inputs, often from multiple sources, in a given situation. We must learn to identify exactly how much information we need to make an effective decision. Too much information will slow down our processing time; too little information will cause unnecessary risk.
Time	A constraint imposed either by the mission or the enemy, requiring action to occur at a certain instant. It will often drive information accumulation and risk threshold.
Uncertainty	Decisions will never be made ‘without doubt’ or with complete protection from error. The goal is to attain the highest degree of precision, relative to the amount of information and the given time constraints.
Experience	Knowledge gained through exposure to an event or idea that has been stored in your memory. It drives information comparison and analysis. The larger experience database, the more we reduce risk, uncertainty, and the amount of information necessary to make a decision.
Human Factors	External factors that influence decision-making, often without the preconceived realization it is happening. We must learn to recognize these external factors and mitigate or control their influence in our decision-making process.

The Decision Making Cycle: Boyd Cycle

In our example of the football team, and description of analytical and recognitional decision making, we have eluded to the Boyd Cycle throughout our analysis. The Boyd Cycle, also known as “The OODA Loop” is a concept coined by USAF Colonel John Boyd, used to describe a reoccurring decision making cycle. The goal is to process the cycle quickly and continuously, allowing the individual to react to the changing environment more quickly than his opponent. The OODA stands for the four elements of decision making as defined by Col Boyd. The four elements are **O**bserve, **O**rient, **D**ecide, **A**ct) and are described below:

Observe

Continued awareness of yourself, your surroundings and your enemy; along with any changes in the situation surrounding those variables. As it relates to tactical action, consider tools used by a hunter who searches an area, actively looks for prey, tracks the prey, watching what the prey is doing or is about to do. In this regard, the hunter can begin to anticipate future moves and get into the mind of the prey.

Orient

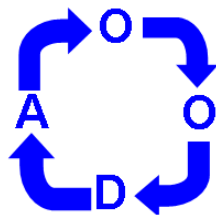
Upon observation, one begins to develop a mental image of the situation seen, gaining awareness. With this awareness, recognition that a decision is necessary in order to influence the situation usually follows. This is where we diagnose, recognize, and analyze changes in the environment we have observed.

Decide

After recognition that a decision is necessary, a course of action is determined. In this case, decisiveness is sought, frequently with an acceptable degree of risk. Effective and succinct communication of this decision is key when we talk about leading subordinates.

Act

Timely and tactically sound decisions are useless alone. In order to influence the situation effectively, leaders must turn decision into action in a time competitive environment.



Decision-Making Cycles (Continued)

The OODA loop is applicable throughout the phases of any operation. Revisit our football example: In the case of the preparatory phase, the team observes and analyzes their opponent by viewing past footage. The team orients on the situation, gaining an awareness of their opponent, identifying where their preparatory actions can affect their opposing team. The team then decides on a course of action or series of plays to exploit the opportunities oriented on. Finally, the team acts on this decision, practicing and rehearsing the plays prior to execution. This preparatory phase is heavy on rational calculation and analytical decision making because the time is available to conduct the analysis.

When game time comes around, the OODA loop remains and is continuous, occurring with each play. The team observes actions taken by the opposing team throughout the course of play. They orient on the fleeting opportunities by gaining awareness of how the opposition is playing. The quarterback then decides on the next play to run, communicates the play to the teammates, and leads them through execution. In this case, analytical decision making is decreased, while recognitional decision making increases due to the compressed timeline (think play clock). Note that if the play is not effectively communicated, the action may fail. Also note that the decision made by the quarterback is inherently riskier than it would be if the quarterback had the time available to be more analytical. Earlier we asked: What increases the quarterback's ability to conduct recognitional decision making and lead the team in that action? The answer is the practice conducted during the preparatory phase. The practice increases the quarterback's recognition by: observing opponent actions over and over again, for which the quarterback can identify patterns; orienting faster on those patterns through feature matching or reasoning by analogy; making a decision before the next play; and acting on that decision.

At the most recognitional level, think about the quarterback who receives the ball and steps backwards to make a pass. Before the pass is thrown, the quarterback recognizes that gaps are beginning to form in the team's perimeter allowing the opposing force access to the quarterback. In this case the opposing team has the initiative over the quarterback. If the quarterback is unable to observe, orient, decide, and act quick enough, the quarterback will stay in place, frozen by inaction, and will be tackled. In this case the quarterback's OODA Loop is larger than the opposing team, as it takes longer for him to make a decision on a course of action. If the quarterback's OODA Loop is smaller than the opposing team, then the quarterback will: observe the gaps forming; orient on the danger they present and the opportunities available to regain the initiative; decide to run out of the perimeter; and act on that decision quickly.

Note the applicability of the OODA Loop to both preparation and conduct of the action. Also note the quarterback's ability to adapt action to what is being observed and oriented on. If the quarterback fell in love with his plan of a pass, then adaptation to the situation may not have happened, a decision to not change course would have been made, and the quarterback would have been tackled. This brings us to the relationship between the Boyd Cycle and adaptive decision making.

Adaptive Decision Making, The Boyd Cycle, & MCDP 1-3

According to MCDP 1, Warfighting: “The military profession is a thinking profession...Since war is a fluid phenomenon, its conduct requires flexibility of thought.” Revisit your Tactical Fundamentals class, in which you were taught the Six Tactical Tenets and the Nine Principles of War. Note their applicability to Decision Making in the contexts we have discussed:

Six Tactical Tenets	Nine Principles of War
Achieving a Decision	Mass
Gaining an Advantage	Offensive
Being Faster	Objective
Adapting	Security
Cooperating	Economy of Force
Exploiting Success & Finishing	Maneuver
	Unity of Command
	Surprise
	Simplicity

At the very heart of how the Marine Corps conducts war is the concept of maneuver. In your Tactical Fundamentals class you learned about temporal maneuver; maneuver achieved in time by building an ever increasing tempo so as to gain an advantage, act faster, and steal the initiative from the enemy. Part of this concept is the ability to adapt to the ever changing environment allowing us to observe changes, orient on opportunities, decide on a plan to exploit those opportunities, and act. In this case, our adaptability is allowing us to achieve a decision, gain an advantage, and act faster by adapting to the environment. This happens throughout all phases of the operation, reparation, conduct, and consolidation.

Adaptive Decision Making, The Boyd Cycle, & MCDP 1-3 (Continued)

As previously discussed, the goal of decision making in the Marine Corps is to be able to make time-competitive decisions based on a keen awareness of the situation; to turn those decisions into action faster than your enemy. As such, the concept of adaptive decision making is nothing new in the Marine Corps. We have always sought to achieve an advantage over our enemies by seeking to adapt to changes in the situation faster than them. Succinctly, adaptable decision making can be defined as decision making originating from an effective change to an altered situation. An effective adaptive leader employs a continuous OODA Loop throughout all phases of an operation that allows for an advantage gain over opponents. Adaptive leaders often display the following characteristics:

Personality Related Characteristics

- Self-sufficient
- Resilient
- Open to Change
- Motivated by Achievement
- Tolerant of Ambiguity
- Willing to Learn

Cognitive Characteristics

- Cognitive Ability
- Problem Solver

Interpersonal Characteristics

- Communicates Well
- Awareness of Self and Others

Domain Specific Experience

- Knowledge of Material
- Experience with Material

These characteristics are important to develop in order to become an adaptive leader. For example, someone who is intolerant of ambiguity will wait for a “perfect sight picture,” and squander an opportunity to adapt to a situation faster than the enemy. In other words the leader will fail to orient and decide fast enough to take meaningful action.

A leader who is unwilling to make mistakes or has an unhealthy fear of failure will often not learn from their mistakes, or adopt a zero-defect mentality, and therefore will not take the “chance” of adapting due to the fear that the resulting action will fail.

A leader that cannot communicate well will not adapt to a situation because their communication to subordinates will not facilitate action.

Adaptive Decision Making vs. Non-Adaptive Decision Making

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| <ul style="list-style-type: none"> • Clear goals • Understand components of the system, the relationships between them, and how it fits into larger systems • More decisions • Smaller rather than larger adjustments • Ask more questions • More hypothesis testing • Extra effort to find disconfirming information • More structured thinking • Reflection of own thought processes and performance | <ul style="list-style-type: none"> • Vague goals • Goal encapsulation • Look for single causes • See situation as collection of independent elements • Over-steering • Over-planning – bang, bang decisions • Ballistic behavior – fire and forget • Look for confirmatory information only • No metacognition or self-reflection |
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The Consequences of Over-Flexibility

So far, we have identified the relationship between analytical and recognitional decision making and how it applies to the different phases of an operation. We have further discussed the OODA Loop and how it applies to both forms of decision making. We have explored the relationship between adaptive decision making, the Boyd Cycle, and how it relates to our tactical and warfighting philosophy. While adaptability is seen as a crucial adjunct throughout decision making, the astute leader must guard against being over flexible. Over-flexibility adds unnecessary risks to your decision making. Combat leaders use adaptability for increased effectiveness. A focus on flexibility will lead simply to change, not necessarily effective change. The effective adaptive leader strikes a balance between reacting in response to the environment and proactively shaping the environment. Over-flexibility can also lead to inconsistent leadership. Constant changes of positions and decisions can lead to a loss of confidence from subordinates, which is also detrimental to an operation. Finally, an over-flexible leader often seeks to change that which already works. In this case, unnecessary change could have negative impacts on not only action outcome, but also subordinate effort.

Decision Making Concept: Wargaming

Returning to the concept of analytical decision making, when time is available we often utilize a concept of wargaming. Wargaming is a technique in which we analyze a plan that we have developed and identify possible friction points that may cause the plan to fail. In other words, we assess what could go wrong with our plan. These reasons could be based on enemy activity, friendly activity, or the effects of terrain and weather. Through wargaming, we can identify shortfalls in our plan and select the most likely friction points. We can either change our plan to mitigate those friction points, or we can build secondary plans allowing us to be more adaptable on the battlefield. One must be careful however to not “wargame to death” and identify only the most likely friction points.

Failure to wargame is usually the result of a commander “falling in love” with their plan, a concept counterintuitive to the adaptive leader. An example of failed wargaming is seen in the story *Blackhawk Down*. During the operation, US military personnel lost the initiative because an analysis was not conducted to identify possible friction points. Accesses to limited routes to and from the objective were not questioned. As a result vehicles were canalized or blocked by insurgent forces. Need for reinforcement was not considered, and as a result was unavailable when needed. Had recent tactics against the Soviets in Afghanistan (utilizing RPGs in a ground to air capacity) been evaluated, the plan for the use of helicopters may have been changed. At the individual level, wargaming may have identified that if effects of the enemy pushed the operation into the night, night vision devices would be needed.

Recollect the scene in the movie *Gettysburg* shown in your Tactical Fundamentals class where General Buford arrives at the Lutheran Theological Seminary. Here, throughout his METT-TC process General Buford successfully wargames actions to take place on the battlefield. As a result of his process, he appropriately adjusts his plan.

The value of wargaming is significant provided it focuses on the most likely scenarios. When done properly, it adds depth and adaptability to our plans and increases our tempo in execution.

Summary

What You Have Learned: As Marine Corps leaders, we make decisions; making good decisions requires continual awareness in the complex and ever-changing environment of combat. To be successful decision-makers in times of friction and uncertainty we must have a large base of experience from which to draw correlations. We must have the moral courage to make decisions with an acceptable degree of risk in a time- competitive environment, in order to gain and maintain the initiative over our enemy. Ultimately, the lives of your Marines will depend on the quality of the foundation of experience you build to make decisions, your decisiveness, and your ability to turn decision into action quicker than your enemy.

Where You Are Going Next: In Tactical Planning I, you will learn the tools and techniques we utilize to perform analytical decision making. Ultimately, you will learn how to take an order from your commander, analyze the mission, decide on an action, communicate that action, and act while maintaining continuous awareness of an ever- changing situation.

References

Reference Number or Author	Reference Title
MCDP 1	Warfighting
MCDP 1-3	Tactics
MCRP 6-11B	Discussion Guide for Marine Corps Values
MCWP 3-11.1	Marine Rifle Company/Platoon

Glossary of Terms and Acronyms

Term or Acronym	Definition or Identification
USAF	United States Air Force
OODA	Boyd Cycle (Observe, Orient, Decide, Act)

Notes