

Lesson Plans for Thinking-in-Time (Module 2)

1. Overall Terminal Learning Objective.

Thinking-in-Time: A Scenario-Based Developmental Method for Army Officers is designed to be conducted through four web-based interactive modules. The terminal learning objective (TLO) for the four modules is:

Action: Demonstrate the thinking-in-time cognitive reasoning skill by which the *dimension of time* (past, present, and future) supports the decision-making process.

Conditions: Given computer based experiential learning activities, explanation of terms, readings, SME videos, and scenario-based feedback.

Standards: The demonstration includes:

1. Define and explain the framework for thinking-in-time (Module 1).
2. Techniques for identifying biases and understanding the past (Module 2).
3. The thinking-in-time process for understanding the present (Module 3).
4. Techniques for identifying biases and anticipating the future (Module 4).

Learning Domain/Level: Cognitive/Evaluation

2. ELO for Module 2 – Understanding the Past

Action: Apply techniques for understanding the past and identifying biases.

Conditions: Given computer based experiential learning activities, explanation of terms, readings, and SME videos.

Standards: The application includes:

1. Assessing the complexity and utility of thinking-in-time
2. Identify critical Patterns/Trends and Causal Chains
3. Consider Organizational/Institutional Memory effects

Learning Domain/Level: Cognitive/Application

3. Scope (Module 2). This module focuses on techniques for avoiding common biases and [for understanding the past](#) using Afghanistan as the scenario. In general, this module focuses on the left side (the past) of the framework for visualizing thinking-in-time. The lesson is divided into five sections.

Objectives of this Module:

- A concrete experience/Afghanistan-based video (*House Hearing on U.S. Withdrawal From Afghanistan*, C-SPAN, 2023) to get students to think about thinking-in-time.
- Scenario (Gold Star Delegation visit) and reflection question using a notional “5 x 8 card.”
- Preparing an LPD for your boss (a MG) consisting of six topics and a reflection question
 - 1 – Techniques for examining the past.
 - 2 – The “five Cs” (Change, Causation, Context, Complexity, or Contingency).
 - 3 – Could/should the ending in Afghanistan been foreseen? (Yes or No, and why?).
 - 4 – What are the top three reasons the American effort in Afghanistan failed?
 - 5 – Biases, particularly explanation bias and hindsight bias.
 - 6 – How institutional/organizational memory could have contributed to the American failure.
- Module Summary.

4. Conduct of the Module.

a. Objectives. In this module, you will:

- Apply thinking-in-time techniques to examine the past.
- Examine the idea of foresight in the context of the past.
- Examine the role of cognitive biases.
- Evaluate how the role of institutional or organizational memory effected the outcome of the Afghanistan war.
- Consider how Historical Perspective-Taking and Experiential Reflection effects thinking.

The screenshot shows a mobile application interface. At the top, there is a navigation bar with a yellow back arrow, a circular icon containing a yellow shield with a black cross, and the text "Thinking-in-Time - Module 2: The Past". Below the navigation bar, the word "Introduction" is displayed. In the top right corner, the version number "v 0.8" and "Screen 2 of 44" are visible. The main content area has a dark background with a silhouette of a soldier running. The text "Objectives of this module" is written in yellow. Below it, the text "In this module you will:" is followed by a bulleted list of objectives. At the bottom, it states "This module takes approximately 50 minutes to complete."

Thinking-in-Time - Module 2: The Past
Introduction
v 0.8
Screen 2 of 44

Objectives of this module

In this module you will:

- Apply Thinking-in-Time techniques to examine the past.
- Examine the idea of foresight in the context of the past.
- Examine the role of cognitive biases.
- Evaluate how the role of institutional/organizational memory effected the outcome of the Afghanistan war.
- Consider how Historical Perspective-Taking and Experiential Reflection effects thinking.

This module takes approximately 50 minutes to complete.

b. Concrete Experience (2-minute video):

The CE uses an excerpt from a *House Hearing on U.S. Withdrawal From Afghanistan*, C-SPAN, 2023 (<https://www.c-span.org/video/?526440-1/house-hearing-us-withdrawal-afghanistan>.. Witnesses gave first-hand accounts of the withdrawal from Afghanistan and its impact as they emotionally testified before the House Foreign Affairs Committee. The excerpt involves the Minority Leader, Gregory Meeks reflecting on the effect of the withdrawal on Gold Star families. He then asks Marine Corps veteran Peter Lucier the question as to whether or not the President should have made the decision to exit Afghanistan. Lusier posits that counter-insurgency was “vague and without direction.” He goes on to say, “Afghanistan was incredibly omplex...and...Congressional oversight was lacking. ”



c. Publish and Process: (4 minutes).

This CE is designed to get the student thinking in the affective domain and reflect on the complexity and consequences of what happened. The student is the instructed to, “Pick one of the questions from the general, and document your initial thoughts to the selected question to help him prepare for the visit with the Gold Star families. Do not do any research, just share your initial thoughts based on your professional knowledge and experience. Keep you answer brief.”

Purpose: This card, at the prompting of the general, allows them to reflect on the video and their personal and professional thoughts on the outcome of the war and the nature of the questions the general is proposing. The questions are all ambiguous and broad. The intent is to get them thinking about the war overall. The first two questions will be deliberately revisited again later in the module.

Question 1. Regarding, “Could/should the ending in Afghanistan been foreseen?” In some ways, it depends on how participants define “ending.” They could contend that “the ending” (the president’s

decision) could not have been foreseen. On the other hand, they could answer it in terms of training a capable Afghan Army and forming a stable central government and that the US could/should have foreseen that was not possible. At this point the question is just intended to get them thinking about the costs and the outcome of the war overall. The question will be posed to them again later. This question also illustrates the problem of *hindsight bias*: the tendency, after an event has occurred, to overestimate the extent to which the outcome could have been foreseen.

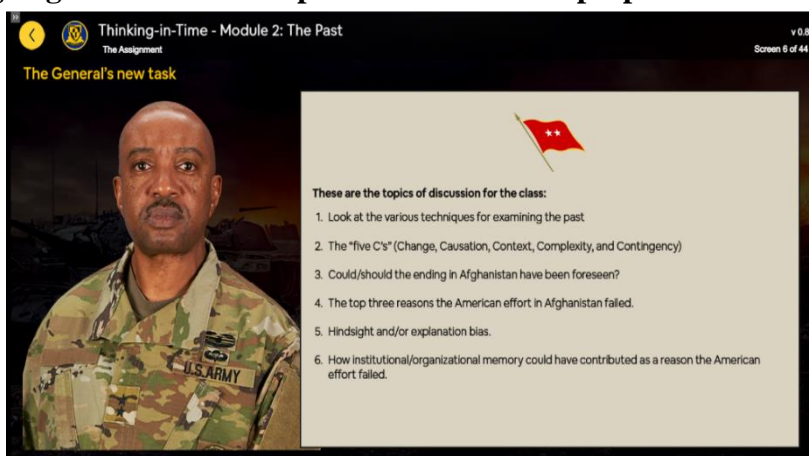
Question 2. On “What are the top three reasons the American effort failed in Afghanistan?” There are at least 15 to 20 plausible reasons. This question illustrates the problem of *explanation bias*: the tendency of historical accounts to trace a clear causal path when contemporary forecasts would have recognized massive uncertainties. The question also illustrates the importance of the “five C’s,” particularly *context*: the study of history to interpret the past in context, but also to actively create context for others, and *complexity*: never fully knowing what happened, nothing has just one cause, and we do not know all causes.

Question 3. “What did the 2,400 Americans deaths in Afghanistan accomplish?” The cynic might say “nothing.” While it is a difficult and somewhat philosophical question, emerging senior leaders should be able to provide a cogent answer—whether the answer is to congressmen, to a *gold star family*, to his subordinates, or to oneself. The answer is also reflective of how the Army remembers this 20-year affair (Organizational memory). Except for a very few incidents (e.g., Bowe Bergdahl) it was a legacy of selflessness, honor, and duty.

Again, the intent with the CE and the publish/process is to get participants thinking about the war overall and all the questions that are revisited later in the module.

5. GNI: The new information was originally presented to the student in Module 1. The new information is reinforced using Afghanistan and the practical exercise to prepare a leader development class. This is essentially “a flipped classroom” where the student uses the material from the module in preparation for the “class.”

The general recognizes that the original three questions warrant more research. He says these questions could serve as a learning opportunity for the entire organization and tasks the student to prepare a leader development class. The general assigns the following six topics and provides reference materials for the student to review in preparation for the class. The student gets feedback after each of the topics.

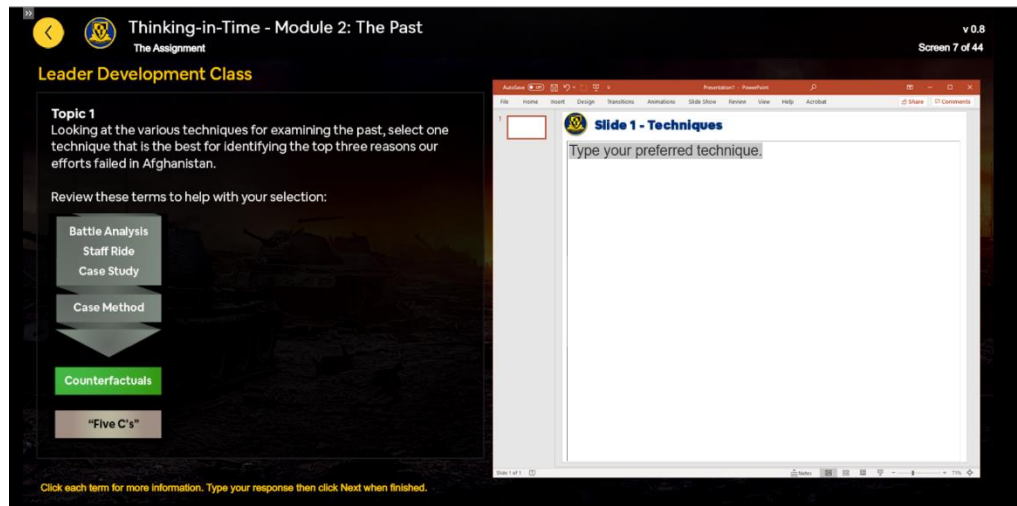


The screenshot shows a virtual classroom interface. On the left, a 3D-rendered character of a general in a U.S. Army uniform is visible. The main area displays a list of discussion topics for a class. The interface includes navigation icons (back, home, search) and a title bar that reads 'Thinking-in-Time - Module 2: The Past' and 'The Assignment'. The text 'The General's new task' is displayed above the list. A small American flag icon is positioned above the list. The list contains six numbered items:

1. Look at the various techniques for examining the past.
2. The "five C's" (Change, Causation, Context, Complexity, and Contingency)
3. Could/should the ending in Afghanistan have been foreseen?
4. The top three reasons the American effort in Afghanistan failed.
5. Hindsight and/or explanation bias.
6. How institutional/organizational memory could have contributed as a reason the American effort failed.

a. **Topic 1. “Looking at the various techniques for examining the past, select one technique that is the best for identifying the top three reasons our efforts failed in Afghanistan.”**

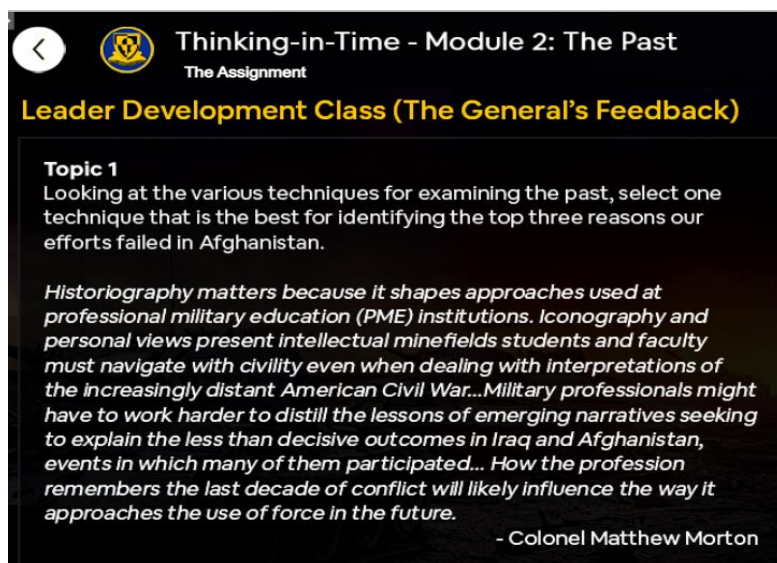
The student can click each technique for more information.



Feedback (3 parts) – The general had the command historian prepare these responses:

(1) While all techniques could yield additional understanding of the past, one could argue that all the previous techniques are inadequate to address the complexity and the context of U.S. involvement in Afghanistan over a 20-year period. One could argue it requires a *historiography*: the writing of history, especially the writing of history based on the critical examination of sources, the selection of particulars from the authentic materials, and the synthesis of particulars into a narrative that will stand the test of critical methods, in order to address these complex questions thoroughly and adequately.

(2) **Historiography** (see quote from Colonel Matthew Morton). Historiography matters because it shapes approaches used at PME institutions.



(3) Consider this (pre-internet) commentary from the U.S. Army CMH's *A Guide to the Study and Use of Military History*:

The legacy of ferment left from older debates in historical interpretation continues in the newer guises, particularly over trends in recent history. ... Regardless of the outcome of current debates among scholars, we may be sure that the same phenomena looked at from different points of view, in the future as in the past, will produce different interpretations. (U.S. Army CMH's *A Guide to the Study and Use of Military History*, 1979).

Thinking-in-Time - Module 2: The Past
The Assignment
Leader Development Class (The General's Feedback)

Topic 1
Looking at the various techniques for examining the past, select one technique that is the best for identifying the top three reasons our efforts failed in Afghanistan.

A Guide to the Study and Use of Military History

Consider this (pre-internet) commentary from the US Army Center of Military History's *A Guide to the Study and Use of Military History*:
...The legacy of ferment left from older debates in historical interpretation continues in the newer guises, particularly over trends in recent history. Thus, a dispute rages between those who accept conventional or official interpretations for the outbreak of World War I, World War II, and the Cold War and those who adopt revisionist views, and between those who would emphasize "consensus" in modern history and those who would stress "conflict." Regardless of the outcome of current debates among scholars, we may be sure that the same phenomena looked at from different points of view, in the future as in the past, will produce different interpretations.

- US Army Center of Military History's *A Guide to the Study and Use of Military History*, 1979

b. Topic 2. "Select the "five C": Change, Causation, Context, Complexity, or Contingency, that is most important to accurately interpret an event like the U.S. involvement in Afghanistan."

Thinking-in-Time - Module 2: The Past
The Assignment
Leader Development Class

Topic 2
Select the "five C" (Change, Causation, Context, Complexity, or Contingency) that is most important to accurately interpret an event like the U.S. involvement in Afghanistan.

- Battle Analysis
- Staff Ride
- Case Study
- Case Method
- Counterfactuals
- "Five C's"

Afghanistan Stability / COIN Dynamics

Slide 2 - Five Cs

Type the "C" that is most important to accurately interpret an event like the U.S. involvement in Afghanistan.

Feedback (2 parts) – The General had the command historian prepare these responses:


Think for a minute about **context** and **complexity** in interpreting and understanding just the U.S. Army's involvement in Afghanistan. As an indicator of the complexity, consider this: The U.S. Army's CMH published two volumes, totaling over 964 pages, primarily on the U.S. Army's first 13 years of this conflict... The conflict went on for another 8 years, Operation Freedom Sentinel, and that is yet to be published. The fact it takes over 900 pages to explain only part of the U.S. involvement demonstrates how difficult it is to gain a thorough understanding of this one historical event.

Thinking-in-Time - Module 2: The Past
The Assignment

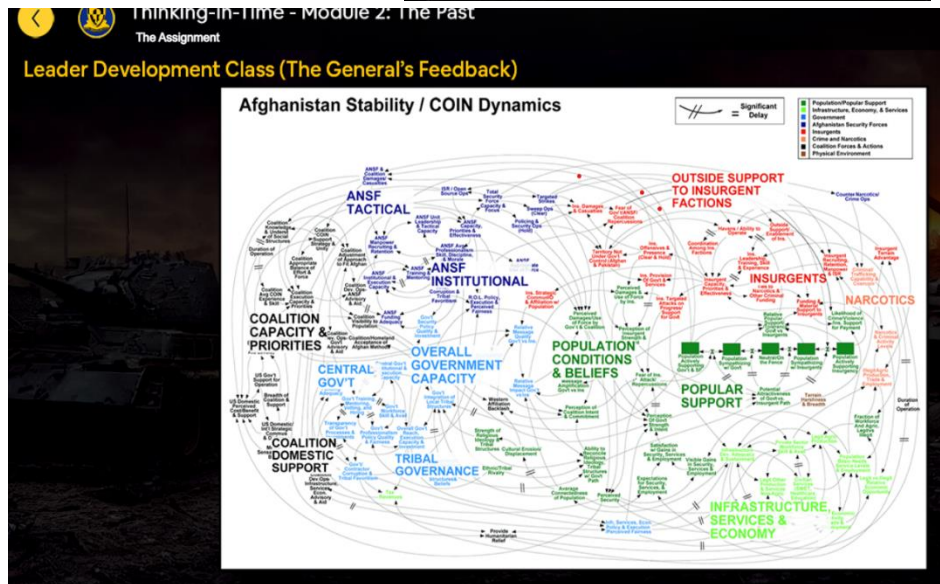
Leader Development Class (The General's Feedback)

Topic 2
Select the "five C" (Change, Causation, Context, Complexity, or Contingency) that is most important to accurately interpret an event like the U.S. involvement in Afghanistan.

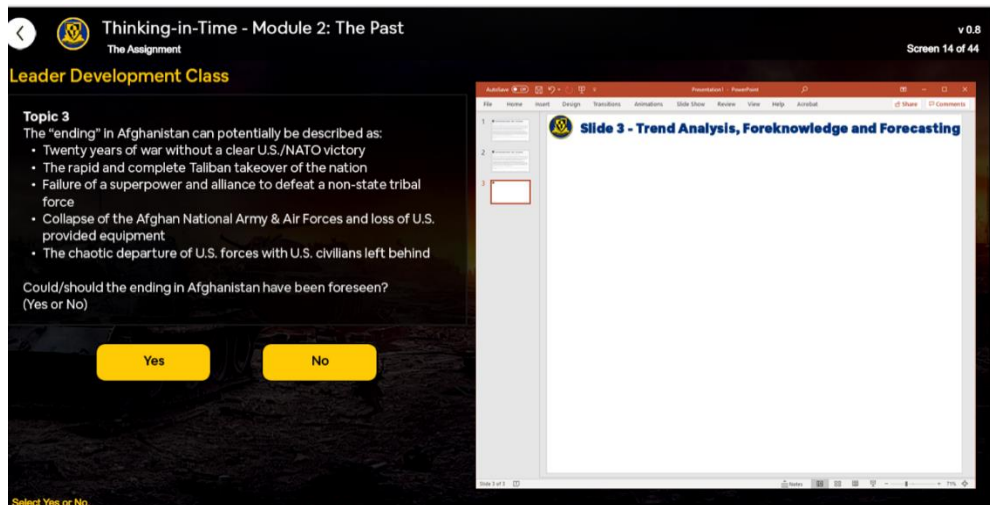
Think for a minute about **Context** and **Complexity** in interpreting and understanding just the U.S. Army's involvement in Afghanistan. As an indicator of the complexity consider this - The U.S. Army's Center of Military History published two volumes, totaling over 964 pages, on primarily just the U.S. Army's first thirteen years of this conflict, i.e., Operation Enduring Freedom (2001-2014). This excerpt of the Overview from Volume I highlights the complexity of Afghanistan, while also explaining the 950-plus pages are only principally looking at the operations in Afghanistan from the operational level of war and that from a U.S. Army-centric perspective only. The conflict went on for another eight years and that is yet to be published.



This causal loop diagram, also known as the spaghetti chart, was frequently used by General McCrystal during briefings. It was created by the P.A. Consulting Group in 2009. The diagram is titled "Afghanistan Stability/COIN Dynamics." This diagram illustrates the relevance of five C's, particularly change, causation, context, and complexity.

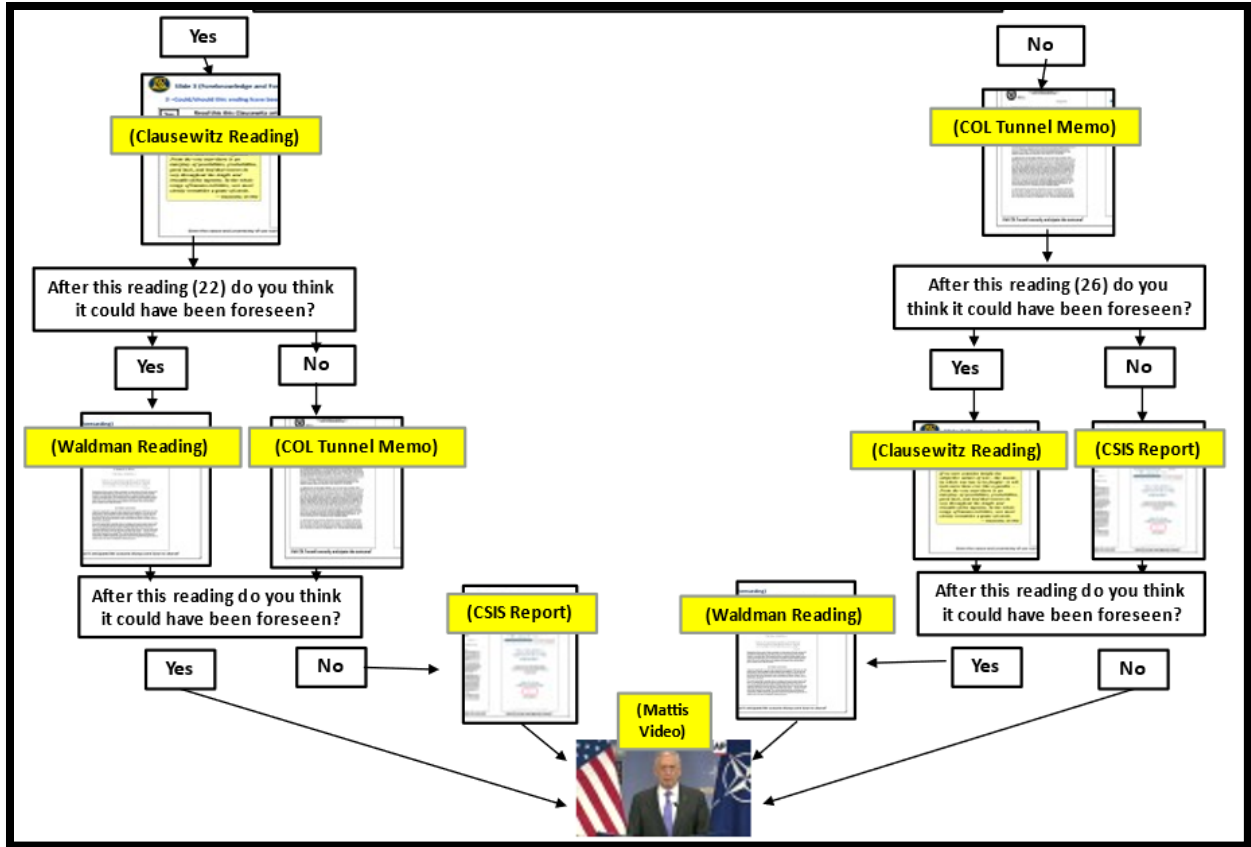


c. **Topic 3. "Could or should the ending in Afghanistan have been foreseen? (Yes or No)**



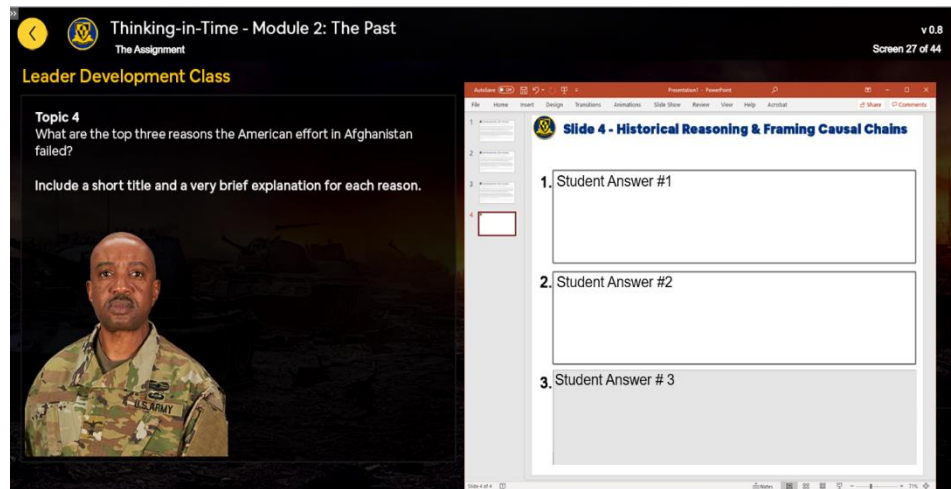
Consider this question in light of three of the relevant thinking-in-time facets: (a) trend analysis, (b) foreknowledge, and (c) forecasting. As you may recall from Module 1, *trend analysis* is recognizing meaningful relationships within and between situations, hypothesizing the likely underlying patterns and trends, and critically examining assumed patterns and trends to make informed predictions about future outcomes. *Foreknowledge* is integrating knowledge about known or safe-to-assume futures, for example budgeting, troop movements, terrain, and seasonal variations in weather in the planning process. *Forecasting* is envisioning multiple likely futures to achieve a desired end state and comparing the likelihood of these futures taking place.

Topic 3 – Tailored Feedback: From this point on, the choice of Yes or No will dictate which product participants see next. See the diagram below for the feedback based on the response to the Yes or No question. This section culminates with a brief June 2017 video of then Secretary of Defense James Mattis. What does this exercise suggest about trend analysis, foreknowledge, and forecasting with respect to the ending of the Afghan War?



d. Topic 4. “What are the top three reasons the American effort in Afghanistan failed.”

The student types in their top three reasons (short titles) for the failure. These responses are compared with the general’s proposed top three reasons. If NLP analysis determines the student listed one (or all) of those three (*corruption, Pakistan, and political blind spots*) the student receives positive feedback.



Topic 4 Feedback:

The short titles of the general's top three reasons/topics from the list are *corruption*, *Pakistan*, and *political blind spots*; the student's top three reasons for the failure carry over from the previous screen.

The student is instructed to review the general's top three reasons, compare their list to the general's list, and then click each document and video to review the information the general provided.

Thinking-in-Time - Module 2: The Past
The Assignment
v 0.8
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Leader Development Class (The General's Feedback)

Topic 4
These are the general's top three reasons the American effort in Afghanistan failed. Compare each reason to your three, and then create a revised and integrated list of the top three reasons.

1. Pakistan
2. Corruption
3. Political "Blind spots"

Review the information the general provided with his top three reasons. Click Next when finished.

The student is then told the general has four more reasons why the American effort in Afghanistan failed. Take a minute to compare these reasons to your list. Click each document to view the information the general provided.

Thinking-in-Time - Module 2: The Past
The Assignment
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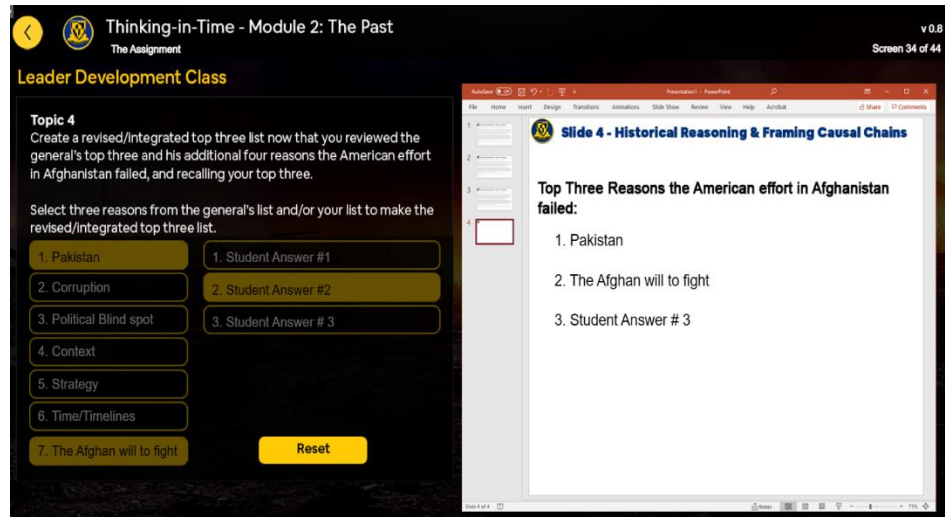
Leader Development Class (The General's Feedback)

Topic 4
These are four more reasons the general thought that the American effort in Afghanistan failed.

4. Context
5. Strategy
6. Time/Timelines
7. Afghan will to fight

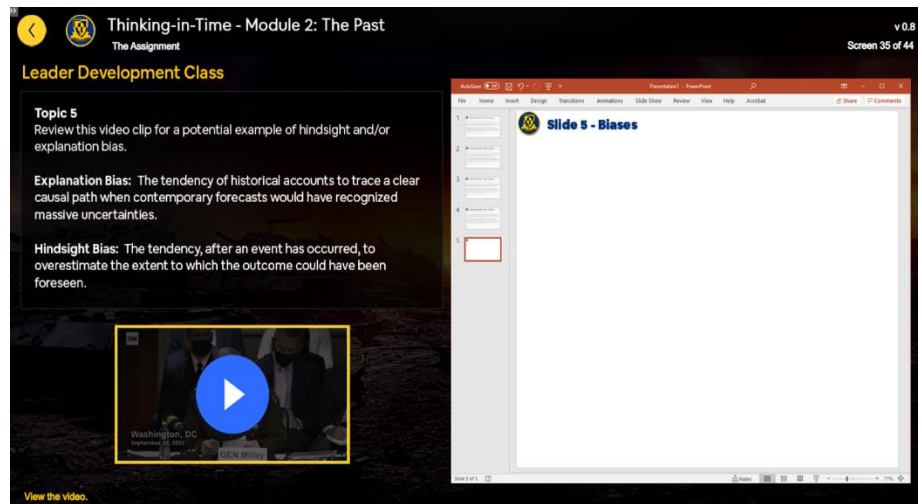
Review the additional information the general provided. Click Next when finished.

In the next screen, the student is directed to create an integrated top-three list after reviewing their reasons and the general's seven reasons. They are told to click three reasons to create the new integrated top-three list and be prepared to share the updates with the general. The right side of the screen shows a sample top-three integrated list



e. Topic 5. Review the video clip for a potential example of hindsight and/or explanation bias.

In the video, GEN Milley stated, “There’s no doubt in my mind that our efforts prevented an attack on the homeland from Afghanistan, which was our core original mission.” The boss would like to know if this statement is an example of hindsight bias, of explanation bias, of both, or of neither.



Topic 5 Feedback:

The student is told to select the best answer then click Submit.

If wrong, the response will say “the General disagrees.” If correct the response says, “The boss agrees that GEN

Milley’s statement is explanation bias. Remember that historical analysis, necessarily written with hindsight, often underestimates the uncertainties of the past. This tendency is called explanation bias. These bias leads individuals, including professional historians, to imply greater certainty in causal analyses than the evidence justifies. Explanation bias is a natural proclivity that affects almost all people some of the time and some people almost all of the time.”

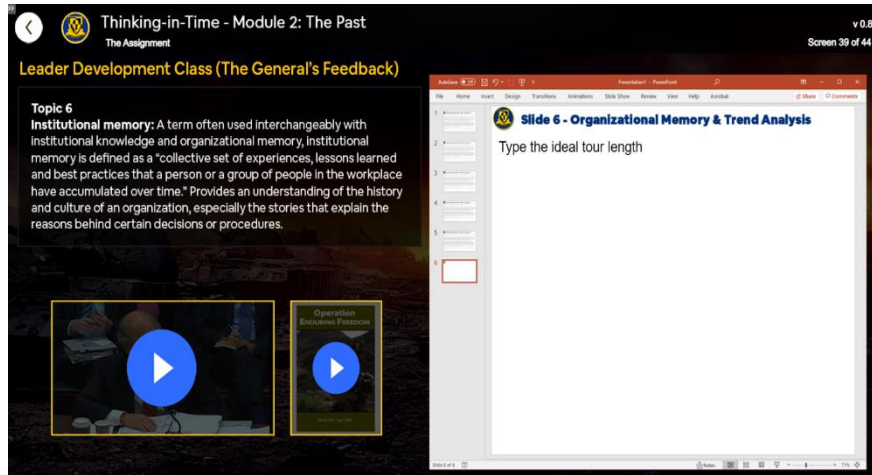
The screenshot shows a presentation slide titled "Slide 5 - Biases". The slide contains two definitions: "Explanation Bias: Tendency of historical accounts to trace a clear causal path when contemporary forecasts would have recognized massive uncertainties." and "Hindsight Bias: The tendency, after an event has occurred, to overestimate the extent to which the outcome could have been foreseen." The slide is part of a presentation titled "Thinking-in-Time - Module 2: The Past" and "Leader Development Class".

f. Topic 6 – The general believes that institutional or organizational memory contributed to why the American effort failed.

Focus on his question: “To improve organizational memory and minimize the chance of failure, how long should unit rotations have been to Afghanistan?” The student types in his recommended tour length,

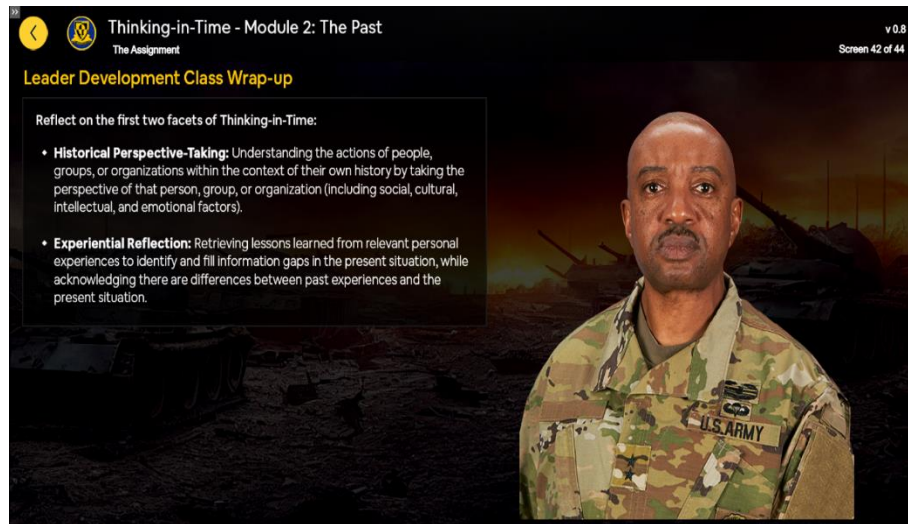
The screenshot shows a presentation slide titled "Slide 6 - Organizational Memory & Trend Analysis". The slide contains a text input field with the prompt "Type the ideal tour length". The slide is part of a presentation titled "Thinking-in-Time - Module 2: The Past" and "Leader Development Class".

Topic 6 Feedback: The student is instructed to review two examples that illustrate the personnel challenges and organizational memory challenges the Army faced in Afghanistan. First is a video of Mr. John Sopko, the Special Inspector General for Afghanistan Reconstruction, testifying before Congress. Second is an excerpt from the *U.S. Army in Afghanistan Operation Enduring Freedom, March 2002 to April 2005*.



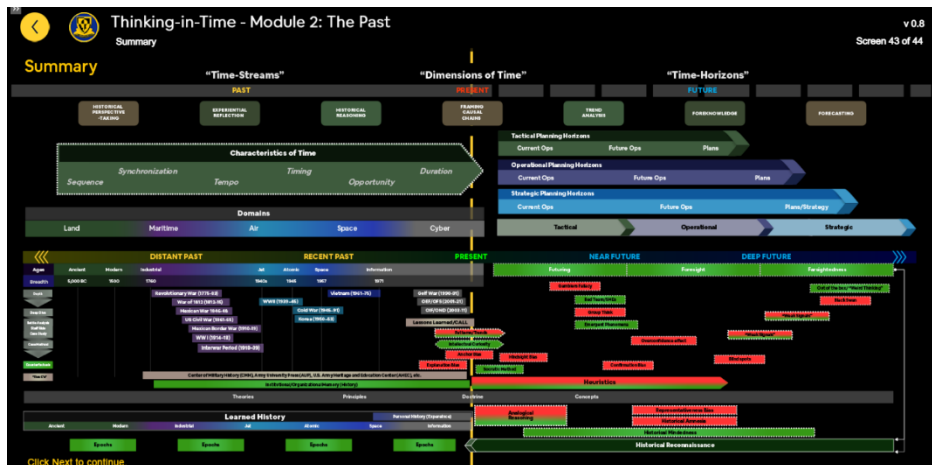
The student is then asked: “Does the video and or reading change the length of your recommended unit rotations?”

The final task is for the student to remember that the general served twice in Afghanistan, first as a battalion XO and second as a brigade commander. How might his knowledge of history and personal experience effect the way he accepted your top three reasons the United States failed in Afghanistan?



6. Lesson Takeaways:

There are several takeaways that you, as an emerging senior leader, should consider when attempting to understand the past. Using the historical and familiar example of the United States’ recent involvement in



Afghanistan and the challenging questions posed to you in this module, you should have gained a deeper appreciation for the various techniques to aid your ability to think in time, and how each of these techniques can provide unique insights and perspectives.

While in the performance of your current role or your senior leader role, leveraging these techniques can aid in strategic thinking when thinking about the past. However, you should also keep in mind that there are a multitude of organizations, resources, and SMEs available, who most likely have already applied these techniques to applicable problems that you may face. This module provided a few examples of these reports. Therefore, you should embrace the need and the requirement for an appropriate amount of research to truly gain critical insights and diverse perspectives, which will clarify answers to specific questions. As in the case of the 20-year war in Afghanistan, extensive reports have already been written, while other scholars and strategists are still analyzing and writing about differing topics and perspectives on the war in Afghanistan. Leveraging the Center for Military History, CALL, and numerous other resources can assist in your quest to think in time effectively.

A clear takeaway is that there is no precise formula for understanding the past. As an emerging senior leader, you should begin to appreciate the sheer complexity toward attempting to understand the past, and the need to approach your analysis with caution by being very critical of any assumptions or adopting simplified answers. The technique of the Five C's, often used in applied history, showcases the difficulty of accurately interpreting and understanding an event like the U.S. involvement in Afghanistan.

Another takeaway is the need for emerging senior leaders to be more self-aware of several biases that can potentially hinder the ability to objectively think in time. Hindsight bias, explanation bias, anchoring bias, availability bias, and other biases, which are often helpful for quick tactical decisions, may often need to be tempered when applied to broader strategic issues or to wicked problems. Thus, questioning, or red teaming one's own conclusions is often appropriate and advised.

You also learned the role of institutional and organizational memory, with particular attention to the role personnel policies had in limiting institutional and organizational memory, often to the detriment of the U.S. objectives in Afghanistan. There are numerous other examples that showcase the importance of understanding the history of your units, their legacies, and the effect on the outcome of past events. Understanding one's own organizational history has significant bearing in understanding unit strengths and weaknesses.

Finally, you learned about the importance of intellectual curiosity and historical mindedness as behaviors necessary for understanding the past. Historical mindedness is a skill set used to cast one's mind backwards to see more accurately when looking forward.

7. Module Summary:

Thinking-in-Time - Module 2: The Past
Summary

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Summary

"Time-Streams"

In this module you:

- Applied Thinking-in-Time techniques to examine the past.
- Examined the idea of foresight in the context of the past.
- Examined the role of cognitive biases.
- Evaluated how the role of institutional/organizational memory effected the outcome of the Afghanistan war.
- Considered how Historical Perspective-Taking and Experiential Reflection effects thinking.

"Dimensions of Time"

PRESENT (PREVIOUS CHAINS) | **FUTURE** (FOREKNOWLEDGE) | **FORECASTING**

Tactical Planning Horizons: Current Ops, Future Ops, Plans
 Operational Planning Horizons: Current Ops, Future Ops, Plans
 Strategic Planning Horizons: Current Ops, Future Ops, Plans/Strategy
 Cyber: Tactical, Operational, Strategic

"Time-Horizons"

DISTANT PAST (Ancient, Modern, Industrial) | **RECENT PAST** (19th, 20th, 21st) | **PRESENT** | **NEAR FUTURE** (Futuring, Foresight) | **DEEP FUTURE** (Foresightness)

Key historical events and concepts are mapped across these horizons, including the Revolutionary War, WWI, WWII, Vietnam, and the War on Terror. Concepts like 'Historical Reconciliation' and 'Hauntology' are also shown.

Learned History

Epochs: Ancient, Modern, Industrial, Atomic, Space, Information

Theses, Principles, Doctrine, Concepts

In this module the student:

- Applied thinking-in-time techniques to examine the past
- Examined the idea of foresight in the context of the past
- Examined the role of cognitive biases
- Evaluated how the role of institutional or organizational memory effected the outcome of the Afghanistan war
- Considered how Historical Perspective-Taking and Experiential Reflection effects thinking

Appendix A: Possible Discussion Questions

1. Could/should the ending in Afghanistan been foreseen?
 - a. Was COL Tunnell, right?
 - b. Was the CSIS Report's Executive Summary, correct?
2. What are the top three reasons the American effort failed in Afghanistan?
 - a. Was Anthony Cordesman correct that corruption was a major cause?
 - b. Was LTG Bolger right (political blind spots)?
3. What did the 2,400 Americans deaths in Afghanistan accomplish?
4. Looking at the various techniques for examining the past, select one technique that is the best for identifying the top three reasons our efforts failed in Afghanistan.
5. Which of the "five Cs": Change, Causation, Context, Complexity, or Contingency, is most important to accurately interpret an event like the war in Ukraine?
6. What is incorrect about GEN Milley's statement "There's no doubt in my mind that our efforts prevented an attack on the homeland from Afghanistan, which was our core original mission
7. To improve organizational memory and minimize the chance of failure, how long should unit rotations have been in Afghanistan?
8. Did the video and/or reading change the length of your recommended unit rotations?"
9. How might the General's knowledge of history and personal experience effect the way he accepted your top three reasons we failed in Afghanistan?
10. How might 20 years of COIN impact our approach to LSCO?
11. What dimension of time (past, present, and future) is the most important?

12. Why is ensuring that the history of the Army—both during combat and contingency operations and during periods of peace—is preserved and understood is fundamental to every Soldier, unit, and command?
13. What are the advantages and disadvantages to the various techniques for diving deeper into history (Battle analysis, Staff Ride, Case Study Method, Case Method, and Counterfactuals or Counterfactual History)?
14. The Five Cs are an approach to historical thinking (change, causation, context, complexity, and contingency). Which is the most important?
15. Which level of warfare (strategic, operational, or tactical) was most important in Afghanistan?
16. How did the Characteristics of Time (Sequence, Synchronization, Tempo, Timing, Opportunity, and Duration) differ for the U.S. and the Taliban?
17. Weak Signals are the first indicators of change or an arising issue that may become significant in the future. Can someone provide an example? What weak signals were missed (or overlooked) in Afghanistan?
18. Confirmation Bias is trap that humans often fall into. We tend to look for evidence that supports the conclusion we've made prematurely, not realizing that evidence can often support several hypotheses. Can someone provide an example from Afghanistan?
19. The Overconfidence Effect is a cognitive bias characterized by an overestimation of one's actual ability to perform a task successfully, by a belief that one's performance is better than that of others, or by excessive certainty in the accuracy of one's beliefs. Can someone provide an example from Afghanistan?
20. What is the most important concept to take away from this module?

21. How can you apply what you have learned in the remainder of this course?

22. How can you apply what you have learned when you get to your next unit?

Appendix B: Thinking-in-Time Framework

