OPEN ACCESS

Journal of Advanced Research in Leadership
eISSN 2783-5928

Cognitive Agility and Mental Resilience: Preparing Leaders for Future Challenges

Yvette O. Rose

Education and Learning Department, Marine Corps Tactics and Operations Group, USA

ARTICLE INFO

Keywords:
Adaptive Learning,
Reflective Learning,
Transformative Learning,
21st Century Conflict,
Systems Thinker

ABSTRACT

The United States Marine Corps (USMC) continues to prepare for conflict. A mixed method study explored leaders' perception of cognitive agility and mental resilience preparedness for future challenges in planning, mission execution, and decision making. An online survey and in-person interviews addressed two research questions (RQ); What are the perceptions of leader preparedness to exercise cognitive agility and mental resilience for future challenges? What impact might a focused Decision Forcing Case (DFC) have on preparing leaders to exercise cognitive agility and mental resilience in planning, mission execution, and decision making for future challenges? Thematic coding of the data formed the literature themes and shaped a theoretical framework. Data analysis results identified three key points; Refine instruction to develop proactive, agile thinking leaders, increase confidence to prepare Marines to be proactive in uncertain and ambiguous environments, and be diligent with recommended revisions to curriculum design and implementations of educative approaches to best prepare leaders for future challenges. A summary of the findings discussed three future implications for designing education and training; Ensure leaders understand and exercise cognitive agility and mental resilience, develop courses and practical exercises focused on preparation for future conflict, and research, create, and incorporate focused DFCs, Tactical Decision Games (TDG), and Kriegspiels (KS) to evaluate and elevate Marines' cognitive agility and mental resilience in planning, mission execution, and decision making for future challenges. Conclusively data supports leaders' plans to develop and deliver deliberate curriculum to prepare leaders for 21st conflict.

1. Introduction

USMC is a military organization comprised of Warfighting Functions generally referred to as components. Within each component are commanders and informal leaders referred to as executive leaders. For this study, 59 military leaders from one of the Marine Corps Schools participated in a mixed methods study. The participants are responsible for educating and training Marines to become leaders with the ability to plan, execute missions, and make

*Corresponding author E-mail address: yvorsirose@yahoo.com

Cite this article as:
Rose, Y. O. (2023). Cognitive Agility and Mental Resilience: Preparing Leaders for Future Challenges. *Journal of Advanced Research in Leadership, 2*(2): 22-40. https://doi.org/10.33422/jarl.v2i2.610

decisions in land, air, sea, cyber, space, and information domains. Regardless of the complexity, ambiguity, or unfamiliarity of the problem, Marine leaders are like chief executive officers (CEO) of civilian organizations or like university professionals. These select executive leaders are educated, trained, and charged with the responsibility to develop, deliver, and assess education and training. However, as technology emerges and innovations evolve, military leaders, like CEOs and university professors, must prepare for future challenges.

Preparation for future conflict may become more challenging, but will remain a critical mission. As war changes and new adversaries emerge, Marines must build efficiency and effectiveness to respond. The transformation of war has Marines considering actions in future conflict requiring increased capacity in cognitive agility and mental resilience (Kumar, 2017). The Commandant's Planning Guidance (2020) states "It is my intent in preparing the force that we account for… [the demands of the 21st century] by creating Marines and their leaders who have superb tactical judgement and are capable of rapid decision making under physical and emotional duress…." (p. 1). Thus, through education, teaching, and repeated practice (MCDP 1, 1997; MCDP 7, 2020), Marines can continue success in future challenges also referred to as 21st century conflict. DFCs, popular wargames designed to assess planning, mission execution, and decision making in various situations, are used by Marine Corps Tactics and Operations Group (MCTOG) leaders to enhance tactical skills and warfighting integration techniques. Leaders are immersed in situations that require agile thinking and resiliency in actions. MCTOG leaders are well-versed in the design, purpose, and participation in DFCs to ensure leaders have repeated practice to plan, execute, and make decisions for traditional combat. However, leaders expressed perceptions of preparedness to stretch their thinking for future challenges. They shared identified deficits for increased cognitive agility in flexible thinking and the need to demonstrate mental resilience in reflection and adaptation. This transformative mindset formed their perception of 21st century preparedness in planning, mission execution, and decision making.

In response to the research questions, this study explains leaders' perceptions of preparedness to exercise cognitive agility and mental resilience and the implication of DFCs to prepare leaders to exercise both during planning, mission execution, and decision making. The literature review, survey data, and observations supported four emerging themes; 1) tactics and warfighting philosophy, 2) leaders as learners, 3) leaders as systems thinkers, and 4) cognitive agility and mental resilience training. Interview responses and survey data formed the theoretical framework; transformative learning, adaptive learning, and reflective learning. The findings and discussion address the literature review and theoretical framework, research method and analysis, results, and implications and recommendations for action and future research.

2. Literature Review and Theoretical Framework

2.1. Evolution of the Marine's Mindset

Tactics and Warfighting Philosophy is a mindset. Marines have applied this mindset through the evolution and innovative incorporation of tactics and warfighting; kinetic or non-kinetic (Creveld, 1991; MCDP 1, 1997). General David H. Berger stated, "The character of war is dynamic…rapid advancement…. accelerated…ensuring that the character of war in the future will be much different than that of the recent past" (Commandant's Planning Guidance, 2021). Thus, it is important that Marines focus on cognitive agility and mental resilience preparedness for future challenges.

Literature captures the theoretical application of tactical flexibility and creativity starting with the Battle of Leuctra in 371 B.C. Several battles followed applying the same tactical philosophy to win. The philosophy of tactics and warfighting continued into combat training exercises at Nellis Air Force Base in Nevada in 1974 and was later coined as a tactical philosophy integrating warfighting functions (Lind, 2018). Proper credence for continued use of tactics and warfighting philosophy can be found in the study of tactical techniques that seemed to out cycle and surprise the enemy (Clemons & Santamaria, 2002; Lind, 2018).

Leaders as learners is a concept for leader developmental and implementation of a clear vision for sudden changes in organizational plans to mitigate knowledge deficits, development of weak strategy, and limited rationale for awareness (Cebrain et al., 2015; Price & Lisk, 2014; Ruben et al., 2017). To enhance the mindset of leaders as learners, leaders are taught to redesign instruction to increase flexible thinking, rethinking, and reflective and adaptability skills (Brown, 2009; Grant, 2021). Learning leaders practice thinking beyond actions in traditional conflicts and must now think forward in preparation of future challenges. This concept engages leader education and application of exercising flexible thinking and adaptation to increase cognitive agility and mental resilience. The evolution of military strategy addresses leaders as learners focusing on how to be an agile, creative, critical thinker (Augier & Barrett, 2019; Clemons & Santamaria, 2002; Lind & Thiele, 2015) especially in preparation for future challenges.

Leaders as systems thinkers prepare leaders to think holistically about adversary situations. Leaders learn to be systems thinkers as global challenges are apparent and are more complex and uncertain (Drew, 2010; Ruben et al., 2017; Senge, 2006). A leader who is a systems thinker, with a mindset to learn, can think and plan well beyond the identified problem. A systems thinker can identify an initial solution and follow-on solutions, seeing resolution for the entire problem set (Price & Lisk, 2014; Ruben et al., 2017; Senge, 2006). Systems thinkers can exercise a great deal of cognitive agility from problem framing to problem solving while identifying potential problems and the ability to provide solutions in layers (Ruben et al., 2017; Senge, 2006).

Cognitive agility training is defined as creative and critical thinking; a mindset dedicated to the process of questioning for logic, understanding, forming solutions, and being reflective (Guillot, 2006). A Marine's mind is considered a weapon to win battles (MCDP 7, 2020; Commandant of the Marine Corps, 2021; The Ellis Group, 2016). Marines are encouraged to be continuous learning leaders. Cognitive agility training helps leaders frame problems and plan layered solutions (Ruben et al., 2017). Cognitive agility is dynamic thinking that aids in successes as future challenges may manifest on the battlefield. As a desired leadership characteristic (Gerras, 2006; Good & Yeganeh, 2012) increased demonstration of cognitive agility could prepare Marines for complex, uncertain, and ambiguous challenges.

Mental resilience training helps leaders think critically and be creative in actions (John Hopkins University & Imperial College London, 2021). Mental resilience defined is the ability to continue to focus even amid distractions, potential and actual failure, and complex, unknown situations requiring sound decisions (Allison, 2012; MCDP 1, 1997). Demonstrating mental resilience generally derives from failure (Matthews et al., 2019) while cognitive agility is a tool used to build capacity in flexibility to overcome those failures (Matthew et al., 2019; Gerras, 2006; Guillot, 2006). Mental resilience and cognitive agility are seen as a system of application in action (Guillot, 2006; Matthew et al., 2019).

2.2. Leader's Mental Framework

2.2.1. Transcendent Leaders: Transformative, Adaptive, and Reflective

Transformative Learning Theory. Transformative learning theory, also known as transformation learning, is a multidisciplinary approach to change and self-reflection (Castelli, 2011; Christie et al., 2015; Edwards, 2017; Ramsey, 2006). Transformative learning theory allows leader to self-discover knowledge deficits and be open to learn new knowledge (Christie et al., 2015; Elder, 2011). Inclusion of transformative learning in education and training helps leaders use previous experiences and new knowledge to build cognitive capacity (Price & Lisk, 2014; Taylor, 2008; Wang et al., 2011). This enables leaders' use of cognitive agility and mental resilience (Maxwell, 1995; Maxwell, 1998; Fisher-Yoshida et al., 2021) for complex and unknown situations. Transformative learning allows leaders to rethink decisions (Elder, 2011; Grant, 2021) using both previous and new experiences. In the "fog of war" (MCDP 1, 1997) leaders are required to demonstrate transformative learning in leadership to make plan, execute, and make decisions (Christie et al, 2015; Heffner et al., 2011; Merriam & Bierema, 2014).

Adaptive Learning Theory. The use of adaptive learning theory focuses on leaders learning the application of taking a holistic metacognitive approach to change as the situation changes (Kahn, 2017), reflecting in actions and on actions (Edwards, 2017; Meriam & Bierema, 2014). Transformative leaders learn to be adaptable and reflective to ensure mental preparedness for unfamiliar situations. Adaptive learning helps leaders develop sustainable leadership regardless of the situation. Leaders can execute a "transformative leap" (Hayashi & Soo, 2012, p. 81) to focus on increasing challenges (p. 80). Purposeful adaptive curriculum design is significant as leaders are confronted with future challenges that will be vague and lack sufficient information to make decisons as well as being presented as a complex and uncertain problem (Commandant of the Marine Corps, 2021, Maxwell, 1998; Talent; Ruben et al., 2014).

Reflective Learning Theory. Reflective learning theory is defined as having a sense of cognitive reflection or being reflective. Reflective learning helps leaders analyze past actions and prepare for better execution of future actions (Edwards, 2017; Merriam & Bierema, 2014; Rodgers, 2002) through transformative teaching and learning. This transformative, adaptive, and reflective mindset becomes of greater use as technology and innovative platforms emerge. A notorious innovation is social media. "Cognitive abilities may be weakened by social media," (John Hopkins University, 2021, p. 3) which naturally change how leaders may think from an emotional view (Matthews et al, 2019; Duncan et al, 2017). Reflective learning helps leaders to think about decisions made based on a variety of options, well-rounded leadership stances, self-awareness, and previous experiences (Duncan et al, 2019; Gardiner & Thompson, 2013; Price & Lisk, 2014). According to Price and Lisk (2014), mental resilience allows leaders to recover quickly and smoothly after adversity. Gardiner and Thompson (2013) attest, "strong leaders must be prepared to face and overcome setbacks and prepare for the next battle" (p. 76). Reflective learning helps leaders better process stressful, uncertain situations and be mentally prepared to adjust rapidly as the situation changes, thinking proactively and anticipating potential challenges (Krulak, 1999; Rodgers, 2002). Reflective learning also helps leaders be aware of their emotional intelligence (Duncan et al., 2017; Goleman, 1997; Merriam & Bierema, 2014) when faced with friction in planning, mission execution, and decision, making especially in 21st century conflict.

2.3. Aim of the Research

This study aimed to explore leaders' view of preparedness for 21st century conflict and what leaders could implement into their leadership development programs to address transformative, adaptive, and reflective teaching and learning for planning, mission execution, and decision making. Respondents addressed areas of leaders' education and training perceptions for preparedness and plans to refine how leaders respond to traditional conflict and be able to quickly transition to a future challenge situation.

3. Method Design

Fifty-nine (59) participants completed a 26-question online survey consisting of 5 demographic questions, 1 open response, and 1 question which asked respondents to participate in an interview. Survey quantitative data was analyzed by grouping questions groups based on the objectives and the research questions. The open response survey data and interview data was analyzed using thematic coding to determine the frequency of responses aligned to the research questions, survey categories, literature themes, and theoretical framework. Data analysis of the survey and interviews identified overarching literature themes and the theoretical framwork.

The research population was a combination of current and previous MCTOG leaders, MCTOG supporting departments, and MCTOG associates. MCTOG is a Marine Corps Base located on the West Coast. MCTOG leaders are responsible for development, delivery, and assessment of education, teaching and training warfighting integration, and planning and decision making curriculum for ground combat commanders, operations officers, operation chiefs, intelligence officers, and intelligence chiefs (MCDP 1, 1997; MCDP 1-3, 1997; MCDP 6, 1997; MCDP 7, 2020). The participants who completed the survey and volunteered to interview were in positions known to have direct knowledge of the application of tactics and integration of warfighting and the necessity to exercise cognitive agility and mental resilience in planning, mission execution and decision-making. The participants also have teaching and training relevant to the evolution of conflicts aligned with the DFCs. This knowledge and experiences contribute to preparing Marines for combat. Collectively, the population resulted in a diverse group of Marine officers and enlisted with years of instructional and leadership experience, military service, and varying roles responsible for edcuating the Marine Corps. Race and gender were not a focal point. Demographic results are shown in Table 1.

Table 1.
Demographic charteristics of the sample

Years of Service	1-5 years: 14% (8)	6-10 years: 7% (4)	11+ years: 80% (47)
Years at MCTOG	3+ years: 22% (13)	1-2 years: 39% (23)	Less than a year: 39% (23)
Position at MCTOG	Instructor: 41% (36)	Support Staff: 15% (13)	Mentor: 13% (11)

Note: At least 50% of participants have 11 or more years of service and directly responsible for educating and training the force.

4. Data Collection Process and Analysis

Data collection was derived from the survey and interviews. The aggregated data and findings determined quantitative measures and qualtiative themes. Quantitative data collected from the survey was analyzed through Survey Goal. Qualitative data collected from the

interviews was procesed through a Visual Basic for Applications (VBA) Macro to capture, sort, and organize the data. This analysis procedure is a coding text using Microsoft Word to capture information aligned to the research questions survey responses and interview transcripts.

Data analysis from the literature addressed three processes to ensure participant recognition for their contribution to the study and readers can deduce the results without additional aid from the researcher (Mayan, 2009, 2016; McNiff, 2013). One, reduce the data to manageable size and organize it for participants' and readers' level of knowledge and understanding. Literature reviews produced data analysis based on the association of survey responses to the supposition of the study (Alsaleh, 2020; Bongarala & Jayanna 2019). Two, organize data with clarity combined with imagery. Literature reviews organized data using electronic databases to present a picture of responses from the different populations of participants (Alsaleh, 2020; Yildiz & Eldeleklioglu, 2021). Three, eliminate unnecessary and irrelevant data. Research studies in the literature organize data into ordinal results (Collett & Green, 2017; Yildiz & Eldeleklioglu, 2021) to present the range of responses to the survey questions. Nonetheless, data analysis, organization, and interpretation to codify key themes are deduced from interviews, surveys, and focus group discussions (Collett & Green, 2017; Mayan, 2009, 2016).

Complete data analysis procedures for this study were key themes specific to the research questions aligned with the survey and the interviews. Responses were not altered to answer an intended hypothesis. Data analysis generated by the Survey Goal software was reduced to overarching themes that addressed the perception of preparedness for future challenges, application of cognitive agility and mental resilience in planning, mission execution, and decision making for future challenges, and response to the impacts of a DFC as value added to preparing leaders. Data analysis of the interviews triangulated the identified key themes. Collected data was organized into a format which allowed participants and readers to similarly understand and subsequently interpret the results. The analysis results were presented as overarching codified themes in a well-organized and concise manner.

5. Results and Discussion

5.1. Results

The combined results are derived from the literature themes and theoretcial framework. Survey questions #6, 7, 8, 14, 15, 21, 23 and 24 were specifically selected for futher analysis purely based on the respondents' perception of leader preparedness. The survey questions explored Marines' perceptions in terms of current level of effectiveness in the application of tactics and integration of warfighting, preparedness to effectively plan, execute missions, and make decisions, current level of effective use of cognitive agility and mental resilience, and the impact of DFCs to prepare leaders for future challenges. The interview responses aligned with the survey questions served as a qualitiative measure of preceived preparedness. Table 2 shows the Leader Perception of Preparedness Survey with the selected questions. Table 3 shows the interview questions.

Table 2.
Leader's Perception of Preparedness Survey

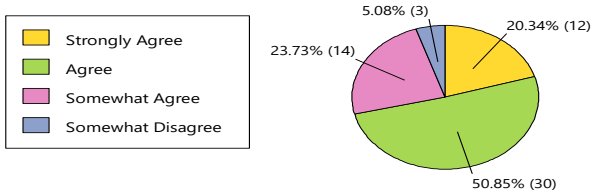
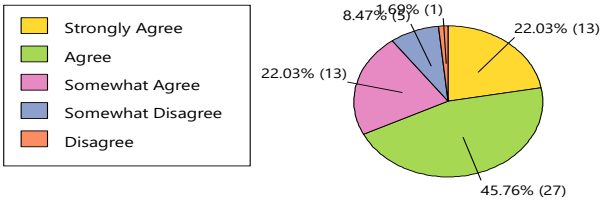
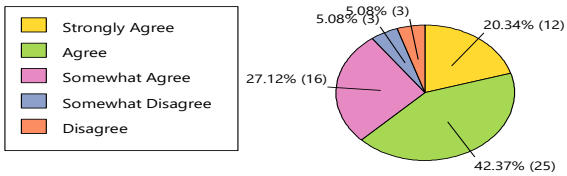
Application of tactics and integration of warfighting
6. I am confident in my knowledge and understanding of Marine Corps tactics and warfighting?
7. I am confident in my ability to apply Marine Corps tactics and warfighting effectively in training?
8. I am confident in my ability to apply Marine Corps tactics and warfighting effectively in combat?
Leader preparedness
14. I am prepared for planning, mission execution and decision making for "future challenges" in conflict?
15. Marines (i.e., instructors, students, and staff) trained at MCTOG are prepared for planning, mission execution and decision making for "future challenges" in conflict?
Cognitive agility and mental resilience
21. Marines currently have the cognitive agility they need to prepare for future challenges.
23. Marines currently have the mental resilience they need to prepare for future challenges.
Impact of DFCs
24. From the list below select the option that best completes the sentence: Participating in DFCs will ____how leaders exercise mental resilience and/or cognitive agility in future challenges.

Table 3.
Leader's Perception of Preparedness Interview Questions

1. Think about the application of tactics and the integration of warfighting. Can you describe in your own words your perception of preparedness for kinetic and/or non-kinetic actions in future wars?
2. In the survey, you were asked if you exercise cognitive agility (flexible thinking) and mental resilience (bouncing forward even in adversity) in planning, mission execution, and decision making. How would you exercise cognitive agility and mental resilience in a combat situation differently than in training for combat?
3. In your experience and position, how have units been successful in framing the problem, wargaming Courses of Action, and then executing the plan effectively?
4. What is your take on whether staffs understand the purpose of planning to ensure they are cognitively agile and flexible in execution and decision making? Please explain.
5. You have perhaps participated in several Decision Forcing Cases (DFC) and responded to how it could assist leaders. Please expand on what you would consider the impact of a focused DFC that could provide repeated practice for cognitive agility and mental resilience?
6. How prepared do you feel you are, in your position, to help Marines be prepared for future challenges in combat or for training?
7. If you feel unprepared, what do you think you could do to be more prepared?

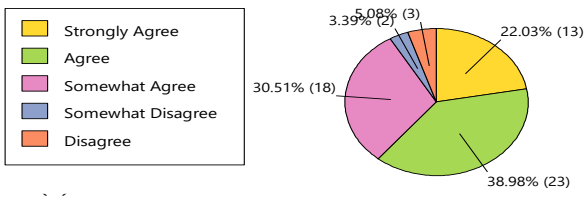
Survey questions #6, 7, and 8 explored the perception of confidence and ability to apply Marine Corps tactics and warfighting in combat compared to training. Results showed 20% (12) perceived to "strongly agree" and 42% (25) "agree" to have confidence to apply tactics and warfighting in combat. For question #7, 22% (13) leaders rated "strongly agree" and 46% (27) "agree" for confidence to apply tactics and warfighting in training. 27% (16) rated "somewhat agree" for application in combat while 22% (13) rated "somewhat agree" for application in training. Participants preceived most Marines have confidence to apply tactics and warfigting in training and equally in combat. Survey data suggests 88% (52) assess having confidence, knowledge, understanding, and can apply Marine Corps tactics and warfighting in training and combat. Table 4 illustrates a summary of findings for question #6, 7, and 8.

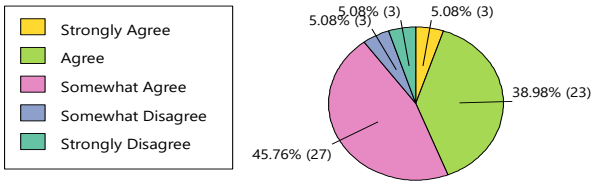
Table 4.
Summary of Survey Findings for question 6, 7 and 8

Survey Topic: Application of Tactics & Integration of Warfighting	**Topic Response /Frequency**	**Graphic data**
6. I am confident in my knowledge and understanding of Marine Corps Tactics and Warfighting	a. Strongly Agree: 20% (12) b. **Agree: 51% (30)** c. Somewhat Agree: 24% (14) d. Somewhat Disagree 5% (3)	
7. I am confident in my ability to apply Marine Corps Tactics and Warfighting effectively in training	a. Strongly Agree: 22% (13) **b. Agree: 46% (27)** c. Somewhat Agree: 22% (13) d. Somewhat Disagree: 8% (5) e. Disagree: 2% (1)	
8. I am confident in my ability to apply Marine Corps Tactics and Warfighting effectively in combat	a. Strongly Agree: 20% (12) b. **Agree: 42% (25)** c. Somewhat Agree: 27% (16) d. Somewhat Disagree: 5% (3) e. Disagree: 5% (3)	

Survey questions #14 and #15 explored leaders' preparedness to engage in future challenges to address research question 1) *What are the perceptions of leader preparedness to exercise cognitive agility and mental resilience for future challenges?* Survey analysis suggests 39% (23) "agree" and 3% (2) "somewhat disagree" of the respondents are personally prepared to exercise cognitive agiltiy and mental resilence in planning, mission execution, and decision making for future conflict. 39% (23) "agree" and 5% (3) "somewhat disagree" Marines trained at MCTOG are equally prepared. Purely based on responses to question #14 and #15 analysis suggests the USMC is confident in the application of tactics and warfighting in preparedness for future challenges. Table 5 depicts the summary of findings.

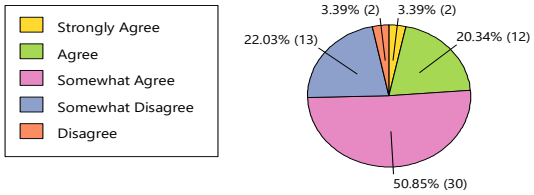
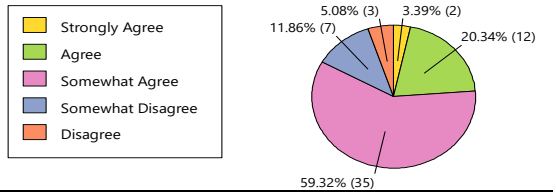
Table 5.
Summary of Survey findings for question 14 and 15

Survey Topic: Leader Preparedness	**Topic Response /Frequency**	**Graphic data**
14. I am prepared for planning, mission execution and decision making for "future challenges" in conflict?	a. Strongly Agree: 22% (13) b. **Agree: 39% (23)** c. Somewhat Agree: 31% (18) d. Somewhat Disagree: 3% (2) e. Disagree: 5% (3)	

Survey Topic: Leader Preparedness	**Topic Response /Frequency**	**Graphic data**
15. Marines trained at MCTOG are prepared for planning, mission execution and decision making for "future challenges" in conflict?	a. Strongly Agree: 5% (3) **b. Agree: 39% (23)** c. Somewhat Agree: 46% (27) d. Somewhat Disagree: 5% (3) e. Disagree: 5% (3)	 8% (5) e. Disagree: 2% (1)

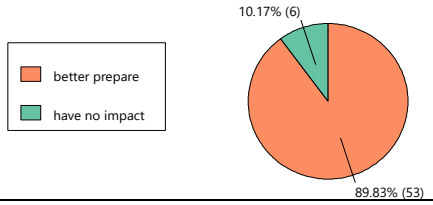
Survey questions #21 and #23 expanded on research question #1 asking to what degree Marines currently have cognitive agility (#21) and mental resilience (#23) to prepare for future challenges. Data analysis shows 92% (54) "strongly agree" to "agree" cognitive agility will impact effective preparedness. However, only 23% (14) "strongly agree" to "agree" that Marines *have* the cognitive agility and 51% (30) "somewhat agree" and 91% (54) indicated "strongly agree" to "agree" mental resilience will impact Marines' ability. Only 23% (14) "strongly agree" to "agree" and 59% (35) "somewhat agree" Marines *have* the mental resilience. Analysis for #21 and #23 suggests Marines are aware of the degree of preparedness, but also realize the need to develop a greater degree of cognitive agility and mental resilience for application in future challenges. Over 50 percent of the responses indicate Marines are "somewhat" prepared as the combine rating of "strongly agree" and "agree" is less than "somewhat agree". Table 6 depicts the summary findings.

Table 6.
Summary of Survey findings for question 21 and 23

Survey Topic: Cognitive Agility & Mental Resilience	**Topic Response /Frequency**	**Graphic data**
21. Marines currently have the <u>cognitive agility</u> they need to prepare for future challenges.	a. **Strongly Agree: 3% (2)** b. **Agree: 20% (12)** c. **Somewhat Agree: 51% (30**) d. Somewhat Disagree: 22% (13) e. Disagree: 3% (2)	
23. Marines currently have the <u>mental resilience</u> they need to prepare for future challenges.	a. **Strongly Agree: 3% (2)** b. **Agree: 20% (12)** c. **Somewhat Agree: 59% (35)** d. Somewhat Disagree: 5% (3) e. Disagree: 3% (2)	

Survey question #24 addressed research question 2) *What impact might a focused DFC have on preparing leaders to exercise cognitive agility and mental resilience in planning, mission execution, and decision making for future challenges?* 90% (53) suggests DFCs could have "better impact" while only 10 % (6) stated "no impact". Analysis suggests most Marine leaders agree that DFCs could be a contributing factor to increase preparedness. Table 7 shows the summary of findings.

Table 7.
Summary of findings for DFC impact to leader preparedness

Survey Topic: Impact of DFCs	**Topic Response /Frequency**	**Graphic data**
24. Participating in DFCs will ____ how leaders exercise mental resilience and/or cognitive agility in future challenges	a. fully prepares b. **better prepare: 90% (53)** c. has no impact: 10% (6)	

Qualitative research aids in the exploratory nature of the respondent's own language and perception (Herr & Anderson, 2015). There were 10 participants who volunteered to interview. Interview data analysis triangulated the survey to the literature themes and theoretical framework. The interview data was grouped according to survey questions, literature themes, the theoretical framework. Table 8 shows the triangulation of the interview questions aligned to the survey questions (SQ), literature themes (LT), and theorectical framework (TF).

Table 8.
Triangulation of Qualitative results: Interview questions, SQ, LT and TF

Interview Question	**SQ/ LT / TF**
1. Think about the application of tactics and the integration of warfighting. Can you describe in your own words your preparedness for kinetic and/or non-kinetic actions in future wars?	SQ: 6, 7 8 LT: The application of Tactics and Warfighting
2. In the survey, you were asked if you exercise cognitive agility (flexible thinking) and mental resilience (bouncing forward even in adversity) in planning, mission execution, and decision making. How would you exercise cognitive agility and mental resilience in a combat situation differently than in training for combat?	SQ: 20, 21, 22, 23 TF: Transformative Learning, Adaptive Learning, Reflective Learnning
3. In your experience and position, how have units been successful in framing the problem, wargaming Courses of Action, and then executing the plan effectively?	SQ: 16, 17, 18, 19 LT: Leaders as Learners, Systems Thinkers TF: Transformative Learning
4. What is your take on whether staffs understand the purpose of planning to ensure they are cognitively agile and flexible in execution and decision making? Please explain.	SQ: 16, 17, 18, 19 LT: Leaders as Learners, Systems Thinkers TF: Transformative Learning
5. You have perhaps participated in several Decision Forcing Cases (DFC) and responded to how it could assist leaders. Please expand on what you would consider the impact of a DFC that focuses on repeated practice for cognitive agility and mental resilience?	SQ: 24 LT: The application of Tactics and Warfighting - impacts of focused DFCs
6. How prepared do you feel you are, in your position, to help Marines be prepared for future challenges in combat or for training?	SQ: 14, 15 TF: Transformative Learning, Adaptive Learnning, Reflective Learning
7. If you feel unprepared, what do you think you could do to be more prepared?	SQ: 14, 15 TF: Transformative Learning, Adaptive Learning, Reflective Learning

Interview question #1 asked participants to describe their perception of preparedness in the application of tactics and warfighting in future wars. Results showed 46 excerpts addressing leader's preparedness in the application of tactics and warfighting in future wars aligned with survey questions #6, 7, and 8. Thematic coding showed 78% (33) addressed the literature

theme leaders' perception of preparedness and 28% (13) included elements of the survey. Table 9 lists a couple supporting interview excerpts.

Table 9.
Interview Question 1: Interview excerpts

Interview Quote	**LT / SQ**
I think we're doing a good job of getting them prepared and getting them to think outside the mindset	Application of Tactics & Warfighting preparedness
…we can condition the body but if we can't condition…the mind to be mentally to think of the things that you're going go beyond what we're going to do	SQ: 6, 7 and 8

Interview question #2 asked participants to describe their perception of exercising cognitive agility and mental resilience in training and in combat. Results showed 51 excerpts supported the theoretical framework; 31% (16) adaptive learning, 48% (25) reflective learning, and 19% (10) transformative learning. Analysis suggests most leaders reflect on their ability to exercise cognitive agility and mental resilience in planning, mission execution, and decision making in training in comparison to combat. Leaders are reflective to the degree that they are willing to be more adaptive and intentionally transformative when placed in a future challenge situation. Table 10 lists some of the interview excerpts.

Table 10.
Interview Question 2: Some Interview excerpts

Interview Quote	**TF**
I mean I feel comfortable in a combat situation that I'll be able to perform and that I would be able to execute	Adaptive
they're more mentally resilient in training so if they don't do well on an exercise, they're okay with it.	Reflective
Constructive and Virtual Training which help stress that the help them practice that so…that those skills…in training will translate over into combat to give you that type of resiliency	Transformative

Interview question #3 and #4 supported the former MCTOG commander's inquiry of leaders' understanding of the purpose of planning to ensure flexibility and resilience in execution. Both interview questions aligned with survey questions #16, 17, 18, and 19 and literature themes; leaders as learners and systems thinkers. Participants were asked to describe their experience where units have been successful in understanding the purpose of planning and executing the plan effectively. Results showed 116 associated interview comments on the perception of executing the plan effectively and staffs understanding the purpose of planning to then exercise cognitive agility and flexibility in execution and decision making. Thematic coding identified 41% (47) comments supporting leaders as learners and systems thinkers and 59% (69) aligned with survey questions. Analysis suggests leaders have an individual understanding of successful planning and execution. Staffs need to understand the purpose of planning and exercising cognitive agility and mental resilience in execution and decision making. In comparison to survey responses 97% (57) collectively "strongly agree" to "agree" they understand the purpose of planning for resiliency and flexibility. Survey question #18 and 19 addressed the planning process aligned an understanding of the commander's vision (intent). Results show 84% (49) leaders "strongly agree" to "agree" the individually understand and can align the commander's vision to the plans. However, results show 67% (39) "strongly agree" to "agree" staffs understand the commander's vision while 78% (54) "strongly agree" to agree" staffs can develop plans aligned to the commander's vision. Interview comments and survey responses suggest leaders understand, can identify why units are successful or unsuccessful, and how to resolve the deficits. Leaders working within a

staff, suggest areas of improvement in flexible planning and how to get staffs to plan according to the commander's intent. Most respondents identified staffs and leaders "fall in love with the plan" and "may not conduct the planning process" to include synchronizing the staff and wargaming the plan. Interview comments also aligned with the literature themes leaders as learners and system thinkers. Participants addressed the need for leaders to continue to learn as situations shift (cognitive agility) and the importance of leaders thinking beyond the current situation and plan for second and third order effects (mental resilience). Table 11 shows some interview comments.

Table 11.
Interview Question 3 and 4: Sample Interview comments

Interview Quote	**LT / SQ**
So, in general, staffs do not understand that the purpose of planning is not to create the plan but to build that cognitive agility and flexibility to then execute in a changing, against a changing environment, against an adaptive adversary.	Leaders as Learners Systems Thinkers
you as a leader or whatever, that your cognitive agility or flexibility understanding that yes you may have a really good plan but because of anything you've done into the system is going to cause it to alter	Leaders as Learners Systems Thinkers
sometimes we fall too much in love with the plan rather than moving on to alternate COAs	SQ: 16, 17, 18, and 19
the challenge we have is sometimes we fall in love with our plan… and don't necessarily recognize when it's time to…go with an alternative COA	SQ: 16, 17, 18 and 19

Interview question #5 and survey question #24 explored leaders' perceptions of the effectiveness of DFCs to prepare leaders for future challenges. Analysis of survey question #24 suggests 90% (53) perceived DFCs to better prepare them for future challenges. Triangulated analysis of survey question #24, the open response, and interview question #5 suggests leaders could use DFCs as added practice but not fully rely on them for preparedness. Nine survey comments specifically or implicitly addressed DFCs for leader preparation. Responses like "DFCs in the classroom with full class size are ineffective," "DFC isn't really made to force you to be flexible, it's really just there to make decisions based on information known in a very low stress environment…" and "DFCs may not adequately prepare Marines to make decisions on the modern battlefield…". This suggests leaders understand education and training limitations of DFCs. Responses such as "seems that promoting mental and cognitive agility/resilience is better supported by complex Kriegspiels that require individuals to react rather than a DFC which tends to end up being almost like an after action…" and "DFC is only one of many tools available towards that end." This suggests leaders would use a DFC, but would also use a Kriegspiel (KS), or Tactical Decision Game (TDG) to allow for greater demonstration of cognitive agility and mental resilience for future challenges. Interview responses support the survey question and the Application of Tactics and Warfighting literature theme. There were 39 comments from interview question #5 of which 47% (18) aligned with the literature theme and 53% (20) expanded on survey question #24. Table12 shows a a few themed responses.

Table 12.
Interview Question 5: Some of the themed responses

Interview Quote	**LT / SQ**
DFCs provide us a false sense of…military awareness	Application of Tactics & Warfighting preparedness
Like a DFC or a TDG or whatever, they're not making emotionally based decisions because nobody's dying. When you start losing…hundreds of people, you start making emotionally based decisions.	Application of Tactics & Warfighting preparedness

Interview Quote	LT / SQ
they're invaluable. I mean these are opportunities to rehearse our actions that will be necessary in combat.	SQ: 24
we strip away the actual environment they're going to be working in and just have it in a clean, very sterile environment, like a classroom, a lot is lost.	SQ: 24

Interview question #6 and 7 and survey question #14 and 15 asked leaders to assess their individual level of preparedness and ability to prepare Marines for future challenges. Results from the interview and survey questions supported the adaptive learning theoretical framework. There were 55 comments which collectively suggests 61% (36) leaders "strongly agree" to "agree" they are personally prepared for future challenges and 31% "somewhat agree". In contrast, 44% (26) "strongly agree" to "agree" Marines trained at MCTOG are prepared while 46% (27) "somewhat agree". Comments from the interview questions showed 53% (29) support leaders' personal perception of preparedness with statements such as "I know it might sound arrogant but I think I'm really prepared" and "I'm super well-prepared even though I think where I am, I'm much better now than I used to be now being at MCTOG." Comments from the interview questions showed 47% (26) may not be as comfortable in their ability to prepare Marines or have the confidence that Marines have been trained for future challenges. Some supported comments were, "I'm limited on my ability to see the future and where that fight might be" and "I think that creating that environment and help them with that but I'm not sure." Analysis suggests leaders have confidence in their ability to be adaptive and transformative to exercise cognitive agility and mental resilience in preparation for future challenges. However, based purely on participant responses, there is room for training and education that could boost their confidence. In addition, Marines trained by MCTOG leaders may be equally prepared. Table 13 summarizes the findings.

Table 13.
Summary of Findings for Interview Question 6 and 7

Interview Quote	LT / SQ
I think any good Marine is confident in abilities	Leader's perception of preparedness
I never feel prepared for combat	Leader's perception of preparedness
I feel more prepared to handle specific situations	Leader's perception of preparedness
I feel very prepared to help Marines	Leader's perception of preparedness SQ: 14-15
Talking to the current instructors, I realize that a lot of things they're dealing with were some of the same things I dealt with and trying to cross the bridges that we had to cross back then.	Leader's perception of preparedness SQ: 14-15
I feel having been through it and I have an open mind to listen to them and say, "Okay hey what are you dealing with?" Let me share with you how we looked at this	Leader's perception of preparedness SQ: 14-15
I feel like I'm pretty good at preparing Marines…I wish I could reach more Marines	Leader's perception of preparedness SQ: 14-15

Summary of the results suggest leaders perceive to understand the need to be more cognitively agile and mentally resilient for future challenges. Leaders understand the importance of enhancing education and training to meet those needs. This could be done through modifications of DFCs to ensure Marines have repeated practice to be well prepared to plan, execute missions, and make decisions for future challenges. Leaders also noted preparation could be accomplished through rigorous wargames, like TDGs, aligned to future situations in conflict and KS wargaming with subsequent debriefs to capture leaders' demonstration of cognitive agility and mental resilience in planning, mission execution and decison making.

5.2. Findings

Tactics and integrated warfighting are concepts by which the Marine Corps plans and executes missions. Conclusively leaders perceive to have knowledge, understanding, and can apply tactics and integrate warfighting. The emergence of 21st century conflict will require leaders to plan, execute, and make decisions in a host of uncertain and complex situations. Data shows most leaders feel prepared for future challenges. Cognitive agility requires flexible and agile thinking as the situation evolves. Mental resilience requires reflective and adaptative actions to "do more than bounce back" but also "bounce forward" from adversity or failure." Results suggest leaders know Marines will need to have greater cognitive agility and mental resilience for future challenges, but most Marines do not have it. Also, in terms of the impact of DFCs, leaders agree that DFCs could contribute to leader preparedness.

Findings in response to RQ1, leaders are confident in the application of tactics and warfighting as they have decades of practice. They perceive to have a good level of preparedness for 21st century conflict. However, leaders recognize the value of a greater degree of cognitive agility and mental resilience necessary for better preparedness. Thus, leaders plan to be more intentional in designing education and training for the fleet. This design will include a leadership development strand to exercise cognitive agility and mental resilience for future challenges. Findings in response to RQ2**,** leaders perceive specifically designed DFCs could be a starting point but not the only point.

A summary of the survey and interview findings suggest leaders perceive there is an understanding of the need to be more cognitively agile and mentally resilient, it is necessary to enhance education and training in their leadership development program, and the need to modify DFCs for repeated practice for preparation to plan, execute missions, and make decisions for future challenges.

6. Discussion

The survey and interviews formed the literature theme and theoretical framework which identifed key implications for further research. Literature review shaped the study through three learning theories; adaptive, transformative and reflective leaqnring theory. Three major themes formed the theorectical framework from thematic coding of the literature, survey data, and interview transcripts; tactics and warfighting philosophy, leaders as learners and system thinkers, and cognitive agility and mental resilience training.

6.1. Tactics and Warfighting Philosophy

Tactics and warfighting literature accounted for many military leaders use of tactics and warfighting for effective planning, mission execution, and decision making for winning (Lind, 2018; Lind & Thiele, 2015; MCDP 1, 1997; Santamaria et al., 200). The Marine Corps continues to incorporate tactics and integrate warfighting for all conflicts (Lind, 2018). In support of the literature, study results proved leaders understand the significance of incorporating tactics and integrating warfighting into future challenges since the Battle of Leuctra in 371 B.C. (Lind, 2018) to current conflicts.

6.2. Leaders as Learners and Systems Thinkers

Literature accounted for leaders as learners and systems thinkers in connection with the evolution of military strategy. This translates into leaders having the willingness to learn and the ability to think (Augier & Barrett, 2019; Clemons & Santamaria, 2002; Lind & Thiele, 2015). Learning leaders and systems thinkers can think and plan for mission execution well

beyond the identified problem; seeing the whole picture (Price & Lisk, 2014; Ruben et al., 2017; Senge, 2006) as well as second and third order effects of decisions made (Ruben et al., 2017; Senge, 2006). In support of the literature, study results proved leaders are aware of deficits in preparedness for future challenges. However, leaders expressed potential actions to increase cognitive agility and mental resilience skills. The recognition as learning leaders and systems thinkers, suggests additional education and training perhaps through the use of focused DFCs, rigor in TDGS, and purpose Kriegsspiel (KS) adding a rigorous cognitive component to stress thinking and mental resilience exercise to ensure leaders can go beyond failures and setbacks.

6.3. Cognitive Agility and Mental Resilience Training

Literature accounted for leaders having critical thinking skills; a mindset to construct questioning for logic, understanding and reflection (Guillot, 2006) to problem frame, conduct critical analysis for immediate resolution and layered solutions (Ruben et al., 2017). Simultaneously, leaders must have the mental resilience to continue to focus amidst distractions, failure, and complexity (Allison, 2012; MCDP 1, 1997). In support of the literature, study results revealed leaders desire for increased application of cognitive agility and better demonstration of mental resilience in unknown, ambiguous situations. Leaders responded that more education and training could potentially ensure Marines are better prepared for planning, mission execution and decision making for future challenges. To address the identified deficit, leaders have incorporated in their courses extensive critical thinking and deliberate planning with a focus on information in the environment.

At the conclusion of the study, three actions were implemented. First, MCTOG spearheaded and coordinated an initiative where leaders participated in DFCs that focused on social media as the problem set. Leaders planned, executed those plans, and practiced decison making as a cognitively focused challenge. Leaders had conversations about their perceptions an ways to become moe agile thinkers with resiliency in actions. Second, leaders participated in a Master Instructor Course 401(MIC) highligthing historical and current warfighting integration and dialogue. This transformative teaching and learning environment allowed leaders to examine, validate, or confirm their perceptions of the application of warfighting in future conflicts. Third, MCTOG planned a three phased Service Level Training Exercise (STLE) to address leader training demonstrating cognitive agility and mental resilience for 21st century conflict. This adaptive teaching and learning concept was presented as a starting point to incorporate educative development and strategic training designs (John Hopkins University & Imperial College London, 2021; Commandant's Campaign Plan, 2021, 2023) to increase cognitive agility and mental resilience for future challenges.

Leaders concluded they will need to be transformative in planning; use previous knowledge and experiences, be open to new knowledge, and transition as needed. The Marines were encouraged to ask "how is the military postured?" As education leaders, we must ask "How is higher education postured?" Leaders will need to be adaptive in planning and mission execution exercising cognitive agility to adjust in stride and demonstrate mental resilience in chaos or failure. Marine leaders will try to answer, "how should military education and training be developed, delivered, and evaluated for effectiveness and efficiency? Leaders in higher education may inquire, "how should we develop, deliver and assess curriculum and be adaptive to generational learning cultures? How might potential global higher education challenges unfold? Leaders will need to be reflective systems thinkers, critical and creative thinkers, and learning leaders to enhance rapid, effective decision making. Is the operational framework valid for success in future challenges? For the educational leader, "Is the

operational framework for higher education valid? Figure 1 is a depiction of the reflective questions which formed the future framework as a mental model for leaders.

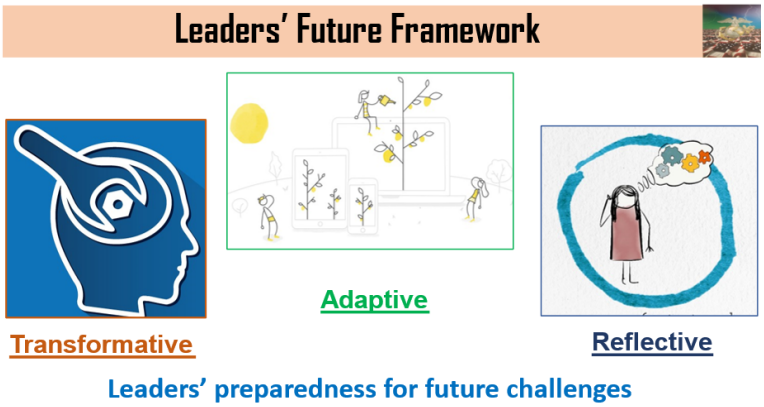


Figure 1. Leaders future framework

7. Conclusion

Marine leaders understand they will face novel sitiautions. Educational leaders know education is changing. Leaders must have the cognitive agility and mental resilience to change as situations change. Leaders know they must learn to be transformative and adaptive. They recognize cognitive agility and mental resilience teaching and training could prepare them for future challenges. They understand the leader's future framework. For MCTOG leaders, education and training revisions was a starting point for action to implement cognitive agility and mental resilience in the curriculum to focus on preparedness for 21st century conflict. Extensive studies can answer how are we, as a Nation, addressing the degree of cognitive agility and mental resilience to avoid dismantling the military and the significance of encouraging higher education paths. This comes with an understanding that curriculum has to be about generational changes and global evolutions. Continued studies can be done on civilian organization leaders' perceptions and actions to address social media narratives, gender freedom, and globalization challenges. As well as current and future leaders in education by exploring leadership in higher education concerning the value of postsecondary education, access, diversity in leadership, equality in selection processes, equity in education, and transparency in education funding. Further research was conducted to determine "What leaders already know?" and "What do leaders need to learn to be best prepared for 21st century competition?

In the interim, MCTOG leaders recognize deficits in education and training, with an understanding of the necessity to implement training that stretches cognitive agility and mental resilience for 21st century preparedness. Education and training initiatves have been developed and implemented to allow leaders repeated practice to demonstrate cognitive agility and mental resilience for 21st century conflict. Decision Forcing Cases (DFC), Tactical Decision Games (TDG), and Kriegsspiels (KS) have focused on planning, mission execution, and decision making in future type situaitons. Data collection and analysis in response to the research questions proved MCTOG leaders understand and plan to enhance their preparedness for future challenges.

References

Allison, E. (2012). The resilient leader. *The Resourceful School*. *69*(4), 79-82.

Alsaleh, N. J. (2020). Teaching critical thinking skills: Literature review. *TOJET: The Turkish Online Journal of Educational Technology*. *19*(1), 21-39.

Augier, M. & Barrett, S. F. X. (2021). A conversation with General Anthony Zinni (ret) on leaders and strategic thinking. *Center for International Maritime Security.*

Brown, T. (2009). *Change by design: How design thinking transforms organizations and inspire innovation*. HarperCollins Publishers.

Castelli, P.A. (2011). Reflective Learning in Practice: Transforming Experiences in a Graduate Global Leadership Curriculum. *ProQuest LLC*.

Christie, M., Carey, M., Robertson, A., & Grainger, P. (2015). Putting transformative learning theory into practice. *Australian Journal of Adult Learning*. *55*(1), 10-30.

Clemons, E. K. & Santamaria, J. A. (2002). Maneuver warfare: Can modern military strategy lead you to victory? *Harvard Business Review*.

Collett, K. & Green, L. (2017). Walking the talk": The influence of an introduction to cognitive education on school leaders. *South African Journal of Education*. 37(3), 1-9. https://doi.org/10.15700/saje.v37n3a1385

Commandant's Campaign Plan. (2021). *Training and Education Design 2030*.

Commandant's Campaign Plan. (2023). *Training and Education Design 2030.*

Commandant of the Marine Corps (2021). *Talent Management 2030*.

Creveld, M. V. (1991). *The transformation of war: The most radical reinterpretation of armed conflict since Clausewitz*. The Free Press.

Department of the Navy Headquarters United States Marine Corps. MCDP 1 Warfighting. (1997). PCN 142 000006 00.

Department of the Navy Headquarters United States Marine Corps. MCDP 7 Learning (2020). PCN 142 000016 00.

Drew, G. (2010). Issues and challenges in higher education leadership: engaging for change. *The Australian Educational Researcher*. *37*(3), 57-75. https://doi.org/10.1007/BF032–16930

Duncan, P., Green, M., Gergen, E., & Ecung, W. (2017). Authentic leadership-is it more than emotional intelligence? *Administrative Issues Journal: Connecting Education, Practice, and Research*. *7*(2), 11-22. https://doi.org/10.5929/2017.7.2.2

Edwards, S. (2017). Reflecting differently: new dimensions - reflection-before and -beyond action. *International Practice Development Journal*. *7*(1). https://doi.org/10.19043/ipdj.71.002

Elder, J. (2011). Teaching for transformation: From learning theory to teaching strategies. *Center for Effective Undergraduate Teaching*. 3(8), 1-3.

Fisher-Yoshida, B., Geller, K. D. & Schapiro, S. A. (2009). Introduction: New dimensions in transformative education. *Counterpoints*. 31,1-19. https://www.jstor.org/stable/42980297

Gardiner, N. & Thompson, S. (2013). *Margret Thatcher on leadership; Lessons for American conservatives today*. Regnery Publishing.

Gerras, S. J. (2006). Thinking critically about critical thinking: A fundamental guide for strategic leaders. *Department of Command, Leadership, & Management U.S. Army War College*.

Goleman, D. (1997). *Emotional intelligence: Why it can matter more than IQ*. Bantam Books.

Good, D. & Yeganeh, B. (2012). Cognitive agility: Adapting to real time decision making at work. *OD Practitioner*. *44*(2), 13-17.

Grant, A. (2021). *Think again: The power of knowing what you don't know*. Penguin Random House, LLC.

Guillot,W. M. (2006). Critical thinking for the military professional. *Military Intelligence Professional Bulletin.* 1-14.

Hayashi, C. & Soo, A. (2012). Adaptive Leadership in times of crisis. *Institute for National Strategic Security, National Defense University. 4*(1), 78-86. https://www.jstor.org/stable/10.2307/26469795

Heffner, S., Kennedy, S. Brand, J., & Walsh, P. (2011). Develop your leaders, transform your organization. *Harvard Business Publishing*.

Herr, K. and Anderson, G. L. (2015). *The action research dissertation*. 2nd ed. Sage.

John Hopkins University & Imperial College London. (2021). Countering cognitive warfare: Awareness and resilience. *NATO Review*.

Kahn, N. (2017). Adaptive or transactional leadership in current higher education: A brief comparison. *International Review of Research in Open and Distributed Learning*. *18*(3), 78-83. https://doi.org/10.19173/irrodl.v18i3.3294

Krulak, C. C. (1999). Cultivating intuitive decisionmaking. *Marine Corps Association*.

Kumar, N. (2017). War beyond rules: Hybrid war and India's preparedness. *CLAWS Journal*. 58-74.

Lind, W. S. (2018). *Maneuver warfare handbook*. Routledge Taylor & Francis Group. https://doi.org/10.4324/9780429499067

Lind, W.S. & Thiele, G. A. (2015). *4th generation warfare handbook*. Castalia House.

Matthews, G., Panganiban, A. R., Wells, A., Wohleber, R. W. & Reinerman-Jones, L. E. (2019). Metacognition, hardiness, and grit as resilience factors in unmanned aerial systems (UAS) operations: A simulation study. *Frontiers in Psychology*. *10*(640), 17. https://doi.org/10.3389/fpsyg.2019.00640

Merriam, S. B. & Bierema, L. L. (2014). *Adult learning: Linking theory and practice*. Jossey-Bass.

Price, R., & Lisk, R. (2014). *The complete leader: Everything you need to become a high-performing leader*. Eagle, ID: Aloha Publishing.

Ramsey, C. (2006). *Introducing reflective learning*. OU Business School.

Rodgers, C. (2002). Defining reflection: Another look at John Dewey and reflective thinking. *Teachers College Record*. *104*(4), 842-866. https://doi.org/10.1177/016146810210400402

Ruben, B. D., De Lisi, R., & Gigliotti, R. A., (2017). *A guide for leaders in higher education core, concepts, competencies, and tools*. Stylus Publishing.

Santamaria, J. A., Martino, V. & Clemons, E. K. (2005). *The Marine Corps way: Using maneuver warfare to lead a winning organization*. McGraw Hill Professional.

Senge, P. M. (2006). *The fifth discipline: The art & practice of the learning organization*. Penguin Random House, LLC.

Taylor, E. W. (2008). Transformative learning theory. *New Directions for Adult and Continuing Education*. 119. https://doi.org/10.1002/ace.301

Wang, G., Oh, I., Courtright, S. H. & Colbert, A. E. (2011). Transformational leadership and performance across criteria and levels: A meta-analytic review of 25 years of research. *Group & Organization Management Sage*. 36(2), 223-270. https://doi.org/10.1177/1059601111401017