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FIRST TO LEARN: AN EXPLORATION OF LIFELONG LEARNING TO ENHANCE MCDP 7

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In order to gain an intellectual edge against adversaries, Marine Corps Doctrinal Publication (MCDP) 7 *Learning* establishes the Marine Corps' learning philosophy and explains why continuous learning is necessary to be successful in warfighting. Its learning philosophy is grounded in neuroscience, psychology, and andragogy; however, it does not draw upon the literature on lifelong learning. This thesis explores if there are conceptual elements of lifelong learning that can be used to leverage, strengthen, and expand MCDP 7's learning philosophy. In order to achieve this objective, a lifelong learning conceptual framework is constructed, comprising three themes: time frame, context, and purpose. It provides a case study on Benjamin Franklin, an empirical example of a lifelong learner who achieved extraordinary success. Using the lifelong learning conceptual framework, an analysis is conducted on MCDP 7 and the Franklin case study, comparing the lifelong learning themes in Franklin's life to those in MCDP 7. This thesis finds that MCDP 7 includes some, but not all, of the subcomponents within each lifelong learning theme that are prevalent in the Franklin case. This thesis recommends the addition of a non-formal learning context to complement formal and informal learning. Furthermore, it recommends areas for future research that can broaden MCDP 7's philosophy to increase buy-in from Marines and instill a deeper connection to learning that can be sustained over time.

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**FIRST TO LEARN: AN EXPLORATION OF LIFELONG LEARNING TO
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Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

In order to gain an intellectual edge against adversaries, Marine Corps Doctrinal Publication (MCDP) 7 *Learning* establishes the Marine Corps' learning philosophy and explains why continuous learning is necessary to be successful in warfighting. Its learning philosophy is grounded in neuroscience, psychology, and andragogy; however, it does not draw upon the literature on lifelong learning. This thesis explores if there are conceptual elements of lifelong learning that can be used to leverage, strengthen, and expand MCDP 7's learning philosophy. In order to achieve this objective, a lifelong learning conceptual framework is constructed, comprising three themes: time frame, context, and purpose. It provides a case study on Benjamin Franklin, an empirical example of a lifelong learner who achieved extraordinary success. Using the lifelong learning conceptual framework, an analysis is conducted on MCDP 7 and the Franklin case study, comparing the lifelong learning themes in Franklin's life to those in MCDP 7. This thesis finds that MCDP 7 includes some, but not all, of the subcomponents within each lifelong learning theme that are prevalent in the Franklin case. This thesis recommends the addition of a non-formal learning context to complement formal and informal learning. Furthermore, it recommends areas for future research that can broaden MCDP 7's philosophy to increase buy-in from Marines and instill a deeper connection to learning that can be sustained over time.

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LIST OF ACRONYMS AND ABBREVIATIONS

CCC	Council for Cultural Co-operation
CoE	Council of Europe
CPD	continuing professional development
CPRL	Commandant's professional reading list
CPRP	Commandant's professional reading program
CRCL	career related continuous learning
E4S	education for seapower
E4SFR	education for seapower final report
EC	European Commission
MCDP	Marine Corps doctrinal publication
OECD	Organization for Economic Cooperation and Development
OODA	observation, orientation, decision, action
PME	primary military education
TECOM	Training and Education Command
UNESCO	United Nations Educational, Scientific and Cultural Organization

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I.   INTRODUCTION

The profound and rapidly changing character of war and conflict in the 21st century compels us to transform our leader development to maintain our competitive advantage and successfully prepare for the emerging ways of war our Nation could face.

—Joint Chiefs of Staff[1]

A.   THE EMERGENCE OF EDUCATION AS A STRATEGIC ASSET

Since the Cold War, the United States has enjoyed massive economic, technological, and military advantages over competing nations worldwide.[2] This dominance and the United States' status as the greatest and most lethal fighting force is slowly eroding as it is contested in the land, air, sea, space, and cyberspace warfighting domains. The *Education for Seapower (E4S) Strategy* has pointed out this trend, stating that, "today, for the first time in decades, we are competing on a more level playing field" as the ambitions and capabilities of our adversaries continue to grow.[3] This realization stems from the *2018 National Defense Strategy* (NDS), which states, "we cannot expect success fighting tomorrow's conflicts with yesterday's weapons or equipment."[4] Therefore, it is imperative to prioritize spending in order to modernize military assets and capabilities.

However, while continuing to update our physical assets and advance our technological capabilities is a critical component of remaining competitive against our adversaries, simply modernizing technology will not be sufficient to ensure victory in

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[1] Joint Chiefs of Staff, "Developing Today's Joint Officers for Tomorrow's Ways of War" (Washington, DC: Joint Chiefs of Staff, May 1, 2020), 1. https://www.jcs.mil/Portals/36/Documents/Doctrine/education/jcs_pme_tm_vision.pdf?ver=2020-05-15-102429-817.

[2] Department of the Navy, "Education for Seapower Strategy" (Washington, DC: Department of the Navy, 2020), https://www.navy.mil/strategic/Naval_Education_Strategy.pdf.

[3] Department of the Navy, 1.

[4] Secretary of Defense, "Summary of the 2018 National Defense Strategy of The United States of America" (Washington, DC: Office of the Secretary of Defense, 2018), 6. https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf

future conflicts. Due to great power competition and the rise of near-peer threats, the Joint Chiefs of Staff (JCOS) have recognized that "there is more to sustaining a competitive advantage than acquiring hardware; we must gain and sustain an intellectual overmatch as well."[5] With the emergence of a great power struggle, our competitive advantage will derive from our military service members' intellectual capabilities. For this reason, the NDS identifies that "the creativity and talent of the American warfighter is our greatest enduring strength."[6] In addition to enhancing our force posture and employment, the 2018 NDS lays out the strategic approach for building a more lethal force through primary military education (PME). The NDS identifies PME as a strategic asset integral to emphasizing "intellectual leadership and military professionalism in the art and science of warfighting."[7]

Although PME is critical to the military profession, there are doubts as to whether or not it effectively prepares military members for war.[8] Former Secretary of Defense James Mattis states that "PME has stagnated, focused more on the accomplishment of mandatory credit at the expense of lethality and ingenuity."[9] In an effort to identify shortfalls within PME, a thorough "review of all aspects of naval education" was conducted and published in the *Education for Seapower Final Report* (E4SFR).[10] The E4SFR states that "the education of our naval leaders is the single most important way to prepare the Naval Services, and the Nation, for a dangerous and uncertain future."[11] However, the analysis of the naval education enterprise led to the conclusion that "there is no overall

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[5] Joint Chiefs of Staff, "Developing Today's Joint Officers for Tomorrow's Ways of War," 2.

[6] Secretary of Defense, "Summary of the 2018 National Defense Strategy of The United States of America," 8.

[7] Secretary of Defense, "Summary of the 2018 National Defense Strategy of The United States of America" (Washington, DC: Office of the Secretary of Defense, 2018), 8, https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.

[8] Secretary of Defense, "Summary of the 2018 National Defense Strategy of The United States of America"; Department of the Navy, "Education for Seapower Final Report" (Washington, DC: Department of the Navy, 2018), https://www.navy.mil/strategic/E4SFinalReport.pdf.

[9] Secretary of Defense, "Summary of the 2018 National Defense Strategy of The United States of America," 8.

[10] Department of the Navy, "Education for Seapower Final Report," 2.

[11] Department of the Navy, 9.

strategic direction or leadership for naval education or naval organizational learning."[12] In response to the E4SFR, the E4S strategy was developed based on the premise that in order "to maintain naval power in an era of great power competition and technological change, the Navy and Marine Corps need to strengthen and expand their educational efforts."[13]

The JCOS' commitment to building educational programs and focusing on education as a strategic asset shows that they "are no longer willing to rely on luck in the hope that the system will produce soldier-scholars like Gens. Mattis and Dunford when the nation needs them."[14] Currently, there "is no continuum of education or system of 'lifelong learning' to identify and educate service members with the aptitude for critical and strategic learning."[15] Therefore, the JCOS concludes, "the evolving and dynamic security environment, which includes disruptive changes in the character and conduct of warfare, demands immediate changes to the identification, education, preparation, and development of our joint warfighters."[16]

The necessity to reinvigorate PME has been magnified by the E4SFR, which recognizes that rapid advances in technology will "transform the speed and character of warfare,"[17] which will begin to exceed "the prowess of the human mind in specific domains of expertise."[18] The United States is moving past an industrial age when environments were well structured, familiar, and repetitive to a Cognitive Age characterized by a dynamic, uncertain, and complex environment.[19] The Cognitive Age requires leaders to evaluate information, think critically, and act decisively in wicked

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[12] Department of the Navy, 5.

[13] Department of the Navy, "Education for Seapower Strategy," 1.

[14] James Lacey, "Finally Getting Serious about Professional Military Education," *War on the Rocks*, May 18, 2020, https://warontherocks.com/2020/05/finally-getting-serious-about-professional-military-education/.

[15] Department of the Navy, "Education for Seapower Final Report," 37.

[16] Joint Chiefs of Staff, "Developing Today's Joint Officers for Tomorrow's Ways of War," 2.

[17] Department of the Navy, "Education for Seapower Final Report," 9.

[18] Department of the Navy, 9.

[19] Mie S. Augier and Sean F. X. Barrett, "Learning for Seapower: Cognitive Skills for the Post-Industrial Era," *Marine Corps Gazette* 103, no. 12 (December 2019): 21–27.

environments.[20] The E4SFR report identifies this transition as an urgent national security task to "intellectually prepare our leaders for uncertainty, by equipping them with a strategic framework of how to think about the future and with a greater understanding of emerging technologies, all gained through a continuous, lifelong process of learning."[21] Given this new era, it is imperative that our military force is prepared to innovate, adapt, and succeed in modern warfare environments.

As we transition from an industrial age to a Cognitive Age, the E4SFR developed the following strategic vision to re-orient education:

> The Naval Education Enterprise must produce leaders of character, integrity, and intelligence steeped not only in the art of war, the profession of arms, and the history of traditions of the Naval service, but also in a broader understanding of the technical and strategic complexities of the Cognitive Age, vital to assuring success in war, peace, and grey zone conflict; officer and enlisted leaders of every rank who think critically, communicate clearly, and are imbued with a bias for decisive and ethical action.[22]

The emergence of education as a strategic asset has highlighted the importance of learning. In order to ensure the implementation of this vision, the E4SFR states that "lifelong education in the naval profession becomes a personal and an institutional responsibility, for achievement in learning is vital for the strategic viability and long-term lethality of our fighting forces and the Nation."[23] Likewise, former Secretary of the Navy Thomas Modly states, "a lifelong passion for continuous learning will be our foundation of any credible deterrent to war."[24] Modly links learning to the future educational vision outlined in E4SFR by stating, "it is only through continuous lifelong learning that our naval leaders

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[20] Mie S. Augier and Sean F. X. Barrett, "Leadership for Seapower: Intellectual Competitive Advantage in the Cognitive/Judgment Era," *Marine Corps Gazette* 103, no. 11 (November 2019): 30–35.

[21] Department of the Navy, "Education for Seapower Final Report," 9.

[22] Department of the Navy, 6.

[23] Department of the Navy, 6.

[24] Thomas B. Modly, "Message from SECNAV," in *Education for Seapower Strategy* (Washington, DC: Department of the Navy, 2020), 1, https://www.navy.mil/strategic/Naval_Education_Strategy.pdf.

will be able to comprehend the dynamic geopolitical environment, and make key decisions that will ultimately affect the security and prosperity of the United States."[25]

In addition to the NDS, E4SFR, and E4S strategy, the former Training and Education Command (TECOM) Commanding General, General William F. Mullen III, USMC (Ret.), states, "there is an increasing dissonance between what we are doing with regard to training and education, and what we need to be doing based on the evolving operating environment."[26] Mullen asserts that the development of a "maneuver warfare culture" requires an "information age approach" that teaches Marines how to think rather than what to think.[27] Furthermore, the 38th Commandant of the Marine Corps, General David H. Berger, identified education and training as one of five priority focus areas in his *Commandant's Planning Guidance*.[28] The Marine Corps, Berger states, "need [s] a doctrinal publication to formulate how Marines will learn in the years ahead and why it is so important that they 'buy in' to the concept."[29]

In 2020, the *Marine Corps Doctrinal Publication (MCDP) 7 Learning* was published to "describe the Marine Corps' learning philosophy" and explains why continuous learning is necessary to be successful in warfighting.[30] MCDP 7 defines "learning" as "developing knowledge, skills, and attitudes through study experience, or instruction."[31] The objective of the learning philosophy is to "create a culture of continuous learning and professional competence that yields adaptive leaders capable of successfully

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[25] Modly, 1.

[26] William F. Mullen III, "TECOM Commander's Guidance" (United States Marine Corps Training and Education Command, July 18, 2018), 1.

[27] Mullen III, 2.

[28] David H. Berger, "Commandant's Planning Guidance: 38th Commandant of the Marine Corps," July 16, 2019, 1, https://www.marines.mil/Portals/1/Publications/Commandant's%20Planning%20Guidance_2019.pdf?ver=2019-07-17-090732-937.

[29] Berger, 17.

[30] U.S. Marine Corps, *Learning*, MCDP 7 (Washington, DC: Department of the Navy, 2020), 1, https://www.marines.mil/Portals/1/Publications/MCDP%207.pdf?ver=2020-03-03-111011-120.

[31] U.S. Marine Corps, 1–4.

conducting maneuver warfare in complex, uncertain, and chaotic environments."[32] In order to achieve this objective, the philosophy identifies four pillars of learning: (1) the nature of learning (2) the culture of learning (3) the learning environment (4) the learning leader.[33]

B.   PROBLEM STATEMENT

MCDP 7 clearly articulates what learning is, the Marine Corps' learning objective, and "why learning is critically important to the profession of arms."[34] At the center of its learning philosophy, MCDP 7 emphasizes "career-long continuous learning,"[35] stating that "learning is an institutional priority and a professional expectation for all Marines."[36] Although, MCDP 7 draws upon neuroscience, psychology, and andragogy (the science of adult learning), how comprehensively it leverages the body of lifelong learning concepts has not been examined.

C.   PURPOSE

The purpose of this study is to research the literature on lifelong learning to explore alternative approaches to career-long learning that can enhance MCDP 7's learning philosophy. Additionally, it seeks to explore the implications of MCDP 7's learning philosophy.

D.   RESEARCH QUESTIONS

This study seeks to answer the following primary research question:

1.   Are there conceptual elements of lifelong learning that can be used to leverage, strengthen, and expand MCDP 7's learning philosophy?

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[32] U.S. Marine Corps, 1–3.

[33] U.S. Marine Corps, *Learning*.

[34] David H. Berger, "Foreword," in *Learning*, MCDP 7, 2020, https://www.marines.mil/Portals/1/Publications/MCDP%207.pdf?ver=2020-03-03-111011-120.

[35] U.S. Marine Corps, *Learning*, 3–20.

[36] Berger, "Foreword," 1.

This study uses the lifelong learning conceptual framework to answer the following secondary research questions:

2. Which lifelong learning time frame does MCDP 7 use?

3. Which lifelong learning contexts does MCDP 7 use?

4. Which lifelong learning purposes does MCDP 7 use?

5. What implications or findings can be drawn from MCDP 7's learning philosophy?

E. METHODOLOGY AND SCOPE

This thesis is a qualitative study that uses a conceptual framework and single case study methodology. A conceptual framework is developed based on a literature review of lifelong learning. The lifelong learning conceptual framework is comprised of three themes: time frame, context, and purpose. Each theme contains multiple subcategories. The time frames for lifelong learning describe when, during a person's life, learning begins and ends. The time frames are cradle-to-grave, career, and adulthood. Learning contexts involve what type of setting learning is conducted in and include formal, informal, and non-formal. Learning purposes encompass personal, professional, economic, and democratic.

Furthermore, this study uses a single case study methodology. It provides a case study on Benjamin Franklin, an empirical example of a lifelong learner. Both MCDP 7 and the Benjamin Franklin case study are analyzed individually using the lifelong learning conceptual framework to categorize them according to the lifelong learning themes. Once categorized, MCDP 7 and the Benjamin Franklin case study are compared to each other. The comparison based on the lifelong learning conceptual framework will be used to draw insights on how conceptual elements of lifelong learning can benefit MCDP 7.

F. ORGANIZATION

This study is comprised of six chapters. Chapter I provides context for why education has emerged as a strategic asset in the military as well as why it is necessary to

develop the mindset of lifelong learning. It also describes the purpose, methodology, research questions, and organization of this study. Chapter II provides background information on why continuous learning is critical to maneuver warfare and the observation, orientation, decision, action (OODA) loop in the Marine Corps. It also provides an overview of the Marine Corps' learning philosophy, *MCDP 7 Learning*. Chapter III provides a literature review of lifelong learning, which is used to construct the lifelong learning conceptual framework based on the three common themes of lifelong learning: time frame, context, and purpose. Chapter IV presents a case study on Benjamin Franklin to provide an empirical example of a lifelong learner. Chapter V uses the lifelong learning conceptual framework to analyze *MCDP 7 Learning* and the Benjamin Franklin case study. Finally, Chapter VI provides the findings, recommendations, and conclusions from the study.

II. BACKGROUND

> Learning is the foundation for all that Marines do—it is the key enabler for all warfighting functions and our purpose as the Nation's naval expeditionary force-in-readiness.
>
> —U.S. Marine Corps[37]

The previous chapter provided context for the emergence of education as a strategic asset within the military due to great power competition and the necessity of lifelong learning for success in a Cognitive Age. In order to develop the skills and competencies necessary to effectively execute maneuver warfare and the OODA loop, Marines must commit to continuous learning throughout their careers.[38] To demonstrate the importance of lifelong learning in a profession of arms, this chapter provides background information on the history of maneuver warfare and the OODA loop within the Marine Corps. It then provides an overview of *MCDP 7 Learning* to outline the Marine Corps' learning philosophy. MCDP 7 asserts that developing the skills necessary to use maneuver warfare and the OODA loop successfully require a commitment to continuous learning, ultimately leading to increased warfighting readiness and an intellectual advantage over adversaries.[39]

A. MANEUVER WARFARE

Due to the inherent unpredictability of war, General Berger, establishes that "continuous learning is essential to maneuver warfare because it enables Marines to quickly recognize changing conditions in the battlespace, adapt, and make timely decisions against a thinking enemy."[40] The nature of war is inherently chaotic, making certainty

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[37] U.S. Marine Corps, *Learning*, 4–12.

[38] U.S. Marine Corps, *Learning*.

[39] U.S. Marine Corps.

[40] Berger, "Foreword," 1.

impossible.[41] Thus all participants must operate in the "fog of war," which is an atmosphere of uncertainty.[42] *MCDP 1 Warfighting* is the Marine Corps' philosophy on warfighting, which seeks to combine Marines' understanding of the nature and theory of war to create a concept that allows them to be successful in uncertain, chaotic, and disorderly environments that characterize war.[43] MCDP 1 defines maneuver warfare as "a warfighting philosophy that seeks to shatter the enemy's cohesion through a variety of rapid, focused, and unexpected actions which create a turbulent and rapidly deteriorating situation with which the enemy cannot cope."[44] In the conduct of war, the Marine Corps has adopted the maneuver warfare concept to recognize and exploit opportunities from a moral, mental and physical dimension.[45]

Prior to maneuver warfare, the Marine Corps used a firepower-attrition approach in which conflict was more physical than mental.[46] Although effective, firepower-attrition requires a numerically superior force; however, the Marine Corps cannot presume that will always be the case.[47] Lind explains that the firepower-attrition style of warfare leads to a "mutual casualty inflicting and absorbing contest where the goal is a favorable exchange rate;" thus it is not sustainable against an enemy that has a numerical or material advantage.[48] Furthermore, Colonel Michael Wyly, USMC (Ret.) argues that "attrition is not even relevant to winning or losing." [49] He claims that attrition focuses on the wrong

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[41] U.S. Marine Corps, *Warfighting*, MCDP 1 (Washington, DC: Department of the Navy, 1997), https://www.marines.mil/Portals/1/Publications/MCDP%201%20Warfighting.pdf.

[42] U.S. Marine Corps.

[43] U.S. Marine Corps.

[44] U.S. Marine Corps, 73.

[45] U.S. Marine Corps, *Warfighting*. Maneuver warfare was heavily influenced by Colonel John Boyd, USAF (Ret.). It is also referred to as the "Boyd Theory."

[46] William S. Lind, "Defining Maneuver Warfare for the Marine Corps," *Marine Corps Gazette* 64, no. 3 (March 1980): 55–58.

[47] U.S. Marine Corps, *Warfighting*.

[48] William S. Lind, "The 'Maneuver Warfare' Concept," *Marine Corps Gazette* 65, no. 4 (April 1981): 55; Gary I. Wilson, "The 'Maneuver Warfare' Concept," *Marine Corps Gazette* 65, no. 4 (April 1981): 49–51; U.S. Marine Corps, *Warfighting*.

[49] Michael D. Wyly, "Teaching Maneuver Warfare," in *Maneuver Warfare: An Anthology*, ed. Richard D. Hooke (New York, NY: Random House Publishing Group, 1993), 52.

objective because a high attrition rate does not necessarily prevent the enemy from functioning and effectively fighting.[50] For this reason, Wyly argues that "what counts is that we destroy the enemy in the right place and control something that he cannot do without."[51] By focusing on destroying the enemy's critical vulnerability, Marines render the enemy's remaining force irrelevant by disrupting his ability to effectively use them.[52] Therefore, Wyly argues the focus of warfighting should be on destruction, not attrition.[53]

In contrast, maneuver warfare marks a drastic reconceptualization of warfighting because it focuses on the psychological destruction of the enemy rather than the physical.[54] Colonel Gary Wilson, USMC (Ret.) explains that the shift to maneuver warfare seeks to eliminate the "fixation with the kill-this-and-kill that syndrome."[55] MCDP 1 expounds on this idea by stating, "the aim is to render the enemy incapable of resisting effectively by shattering his moral, mental, and physical cohesion—his ability to fight as an effective, coordinated whole—rather than to destroy him physically through the incremental attrition of each of his components, which is generally more costly and time-consuming."[56] The objective of maneuver warfare is to create "unanticipated and threatening situations" that prevent the enemy from functioning effectively.[57] The enemy's weaknesses are thereby

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[50] Michael D. Wyly, "The 'Maneuver Warfare' Concept," *Marine Corps Gazette* 65, no. 4 (April 1981): 52–53.

[51] Wyly, 52.

[52] Michael D. Wyly, "The 'Maneuver Warfare' Concept," *Marine Corps Gazette* 65, no. 4 (April 1981): 52–53. MCDP 1 defines a critical vulnerability as "a vulnerability, that if exploited, will do the most significant damage to the enemy's ability to resist." Complementary to the concept of a critical vulnerability is a center of gravity, which are integral sources of strength. Examining an enemy critical vulnerability provides insight on how to best attack their center of gravity. See U.S. Marine Corps, *Warfighting*, MCDP 1 (Washington, DC: Department of the Navy, 1997), 47, https://www.marines.mil/Portals/1/Publications/MCDP%201%20Warfighting.pdf.

[53] Wyly, "The 'Maneuver Warfare' Concept." The author notes that this is not to say that attrition is not important and will not occur. It means that attrition should not be the main activity toward which leaders direct every effort.

[54] Wilson, "The 'Maneuver Warfare' Concept."

[55] Wilson, 49.

[56] U.S. Marine Corps, *Warfighting*, 73.

[57] Wilson, "The 'Maneuver Warfare' Concept."

exposed, which lead to decisive opportunities that can be fully and aggressively exploited.[58]

A common misconception about maneuver warfare is that it only pertains to moving physical forces in a spatial dimension, whereas in fact it encompasses multiple dimensions to create an advantage.[59] Joint Publication (JP) 1–02 *Department of Defense Dictionary of Military and Associated Terms* defines "maneuver" as the "employment of forces in the operational area through movement in combination with fires to achieve a position of advantage in respect to the enemy."[60] This definition of maneuver is often confused with maneuver warfare, and Lind argues that it is "too narrow, in that it fails to portray maneuver as a continuous, psychological as well as physical process."[61] An integral component to grasping the true essence of maneuver warfare is understanding the term "maneuver" encompasses psychological, technological, temporal, and spatial dimensions.[62] Operating from all dimensions results in cumulative effects that "contribute to the enemy's systemic disruption."[63]

In addition to disrupting the enemy from multiple dimensions, speed, surprise, and the need to focus efforts against critical enemy vulnerabilities are inherent to maneuver warfare.[64] MCDP 1 defines a critical vulnerability as "a vulnerability, that if exploited, will do the most significant damage to the enemy's ability to resist."[65] Speed, the element of surprise, and focusing efforts on critical vulnerabilities are leveraged to create an advantage by attacking the enemy's ability to make decisions.[66] The goal is to place the

[58] U.S. Marine Corps, *Warfighting*.

[59] U.S. Marine Corps.

[60] Department of Defense, *Department of Defense Dictionary of Military and Associated Terms*, Joint Publication 1-02, 2010, 145, https://fas.org/irp/doddir/dod/jp1_02.pdf.

[61] Lind, "The 'Maneuver Warfare' Concept," 54.

[62] U.S. Marine Corps, *Warfighting*.

[63] U.S. Marine Corps, 74.

[64] U.S. Marine Corps, *Warfighting*.

[65] U.S. Marine Corps, 47.

[66] U.S. Marine Corps, *Warfighting*.

enemy in unexpected dilemmas where he views the situation as rapidly deteriorating in order to invoke "panic and paralysis."[67] The enemy's system is "shattered" when the enemy "perceives he has lost control and becomes the victim of disruption, confusion, and disorganization."[68] Ultimately, the enemy loses the ability to resist.[69]

The complexity involved with successfully executing maneuver warfare against a thinking adversary requires leaders at all levels who possess the ability to think and adapt, which is developed through continuous learning.[70] The physical, mental, and moral demands that are fundamental to the nature of war create an environment of fear, uncertainty, and friction that Marines must be prepared to operate in.[71] The fog of war forces Marines "to make decisions based on incomplete, inaccurate, or even contradictory information."[72] For this reason, Colonel Wyly argues that Marines' decision-making ability is what will determine success in maneuver warfare; therefore, it is critical to develop "judgment that can be applied in decision making."[73] Furthermore, MCDP 7 states, "developing fundamental cognitive competencies such as problem framing, mental imaging, critical thinking, analysis, synthesis, reasoning, and problem solving enables Marines to make effective decisions more quickly in time-constrained operational environments."[74] In order to be successful in warfare, these cognitive competencies must be learned, developed, and refined over time through continuous learning.[75]

B.   OODA LOOP

In addition to exercising rapid decision-making to create an advantage and exploit opportunities, Marines must attack "the enemy's ability to make decisions" as well.

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[67] U.S. Marine Corps, 74.

[68] Wilson, "The 'Maneuver Warfare' Concept," 49.

[69] U.S. Marine Corps, *Warfighting*.

[70] U.S. Marine Corps.

[71] U.S. Marine Corps.

[72] U.S. Marine Corps, 7.

[73] Wyly, "Teaching Maneuver Warfare."

[74] U.S. Marine Corps, *Learning*, 1–6.

[75] Berger, "Foreword."

Integral to maneuver warfare is the observe-orient-decide-act (OODA) loop, which is a "time-competitive" decision-making framework.[76] The OODA loop was created by Colonel John Boyd, USAF (Ret.) as a framework to maintain the "ability to adapt while negating that to the opponent."[77] Marines cycle through each phase within the OODA loop to gain situational awareness, make decisions, and take action. Ultimately, the OODA loop leads to "decision superiority" and "the ability to adapt to unfolding, multidimensional events which occur at different time scales."[78] Figure 1 provides a visual representation of the OODA loop.
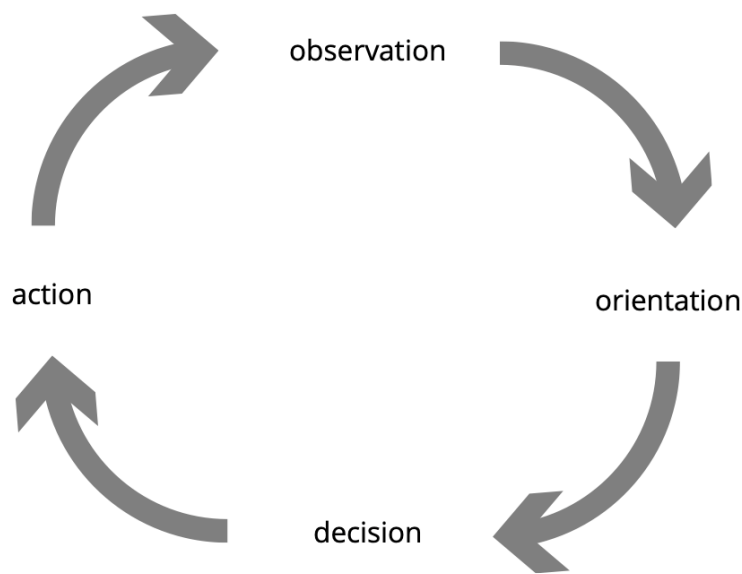
Figure 1.   OODA Loop[79]

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[76] John R. Boyd, "Patterns of Conflict," http://www.projectwhitehorse.com/pdfs/boyd/patterns%20of%20conflict.pdf. Boyd references this as the O-O-D-A loop but it is more popularly pronounced and known as OODA. The OODA loop is also known as the "Boyd cycle."

[77] Frans Osinga, *Sciecne, Strategy, and War: The Strategic Theory of John Boyd* (The Netherlands: Eburon Academic Publishers), 273, accessed December 28, 2020, http://www.projectwhitehorse.com/pdfs/ScienceStrategyWar_Osinga.pdf.

[78] Osinga, 273.

[79] Source: Ian T. Brown, *A New Conception of War: John Body, The U.S. Marines, and Maneuver Warfare* (Quantico, VA: Marine Crops University Press, 2018), 117, https://www.usmcu.edu/Portals/218/ANewConceptionOfWar.pdf?ver=2018-11-08-094859-167. Although Boyd referenced the OODA loop frequently in his briefing of *Patterns of Conflict*, he did not provide a visual representation. Figure 1 is not Boyd's creation but is how the OODA loop is commonly depicted. Boyd provided his own graphic of the OODA in his brief *The Essence of Winning and Losing* in 1995, two years before he passed away. Boyd's graphic can be found in Appendix A.

The first step in the cycle is observation. Osinga explains, "it is the method by which people identify change, or lack of change, in the world around them."[80] Observation requires constant awareness of yourself, the enemy, and your surroundings.[81] *MCDP 1-3 Tactics* compares this step to developing a "hunting instinct."[82] Marines must actively search for, track, and watch the enemy to see what he is doing or about to do.[83] It is through observation that Marines begin to "get inside" the enemy's mind and anticipate the enemy's next move.[84]

Based upon observations of the surroundings, Marines orient themselves by developing "a mental image of the situation and gains situational awareness."[85] During this phase, each Marine must take into account their "cultural traditions, genetic heritage, new information, previous experiences, and analysis/synthesis process" to orient themselves.[86] Each person will orient themselves based on their individual experiences, which means every person will orient themselves differently. Thus, Boyd notes that human differences in experiences make the loop unpredictable.[87] Boyd believed that orientation was the most important step in the cycle because "orientation shapes observation, shapes decision, shapes action, and in turn is shaped by the feedback and other phenomena coming into our sensing or observing window."[88] For this reason, most observations would be meaningless without the context of orientation.[89] The ability to efficiently and effectively

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[80] Osinga, *Sciecne, Strategy, and War: The Strategic Theory of John Boyd*, 271.

[81] U.S. Marine Corps, *Tactics*, MCDP 1-3 (Washington, DC: Department of the Navy, 1997), https://www.marines.mil/Portals/1/Publications/MCDP%201-3%20Tactics.pdf.

[82] U.S. Marine Corps.

[83] U.S. Marine Corps.

[84] U.S. Marine Corps.

[85] U.S. Marine Corps, 70.

[86] Robert Coram, *Boyd: The Fighter PIlot Who Changed the Art of War* (Back Bay Books, 2004), 335.

[87] Osinga, *Sciecne, Strategy, and War: The Strategic Theory of John Boyd*.

[88] Osinga, 271.

[89] Osinga, *Sciecne, Strategy, and War: The Strategic Theory of John Boyd*.

orient enables Marines to "comprehend and cope" with the chaotic and unpredictable environment.[90]

Once Marines are oriented, potential actions will be generated and each must be considered before making a decision.[91] Marines must analyze all of the information and decide upon a course of action.[92] After a decision has been made, Marines take action on the decision. MCDP 1-3 refers to this as the "execution phase."[93] Osinga states that actions should be "rapid, surprising, ambiguous, menacing and varied."[94] Once an action occurs, the situation changes, and Marines start the cycle over by observing the effects of their actions.[95]

One aspect of the OODA loop is to focus on speed and making decisions rapidly. In regard to speed, the aim of the OODA loop is to "render the enemy powerless by denying him the time to mentally cope with the rapidly unfolding, and naturally uncertain circumstances of war."[96] MCDP 1 defines "speed" as "rapidity of action," which "applies to both time and space."[97] The ability to move quickly can be thought of as speed over space.[98] Speed is a weapon in war; however, relative speed is more important than absolute speed.[99] Speed is impactful only if we are operating faster relative to the enemy.[100] A faster speed can be achieved by either increasing one's own speed or by decreasing the

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[90] Osinga.

[91] Brown, *A New Conception of War: John Body, The U.S. Marines, and Maneuver Warfare.*

[92] U.S. Marine Corps, *Tactics.*

[93] U.S. Marine Corps, 70.

[94] Osinga, *Sciecne, Strategy, and War: The Strategic Theory of John Boyd*, 271.

[95] U.S. Marine Corps, *Tactics.*

[96] Osinga, *Sciecne, Strategy, and War: The Strategic Theory of John Boyd*, 273.

[97] U.S. Marine Corps, *Warfighting*, 40.

[98] U.S. Marine Corps, *Warfighting.*

[99] U.S. Marine Corps.

[100] U.S. Marine Corps.

enemy's speed.[101] MCDP 1-3 explains that a critical component of maneuver warfare is the ability to cycle through the OODA loop faster than the enemy:[102]

> As our enemy observes and orients on our initial action, we must be observing, orienting, deciding, and acting upon our second action. As we enact our third, fourth, and fifth move, the time gap between our actions and our enemy's reactions increasingly widens. Our enemy falls behind in a panicked game of catch up.[103]

The second aspect of utilizing the OODA loop is altering tempo.[104] Similar to speed, "tempo" is the ability to operate quickly and can be thought of as speed over time.[105] Instead of making decisions faster than the enemy, altering the tempo involves generating a rapidly changing environment and inhibiting the enemy's ability to adapt to it.[106] Marines can compress the amount of time it takes to observe a situation and take action while simultaneously stretching-out the adversary's time.[107] This creates a "favorable mismatch in time/ability to shape and adapt to change."[108] Thus, The OODA loop enables Marines to "create and perpetuate a highly fluid and menacing state of affairs for the enemy, and to disrupt or incapacitate his ability to adapt to such an environment."[109]

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[101] U.S. Marine Corps.

[102] U.S. Marine Corps, *Tactics*.

[103] U.S. Marine Corps, 71.

[104] Osinga, *Sciecne, Strategy, and War: The Strategic Theory of John Boyd*.

[105] U.S. Marine Corps, *Warfighting*.

[106] Boyd, "Patterns of Conflict."

[107] Boyd. Boyd identified four qualities that were critical to getting inside the enemy's OODA loop–variety, rapidity, harmony, initiative. Variety and rapidity cause an enemy to take longer to respond because it increases their friction. Conversely, harmony and initiative enable one to reduce their own friction, which results in shorter response times. Altogether, these qualities enable one to "[o]perate inside adversary's [OODA] loop to enmesh [the] adversary in a world of uncertainty, doubt, mistrust, confusion, disorder, fear, panic, chaos" to the point that the adversary cannot cope with events as they unfold. See Boyd, "Patterns of Conflict." (p. 177). Boyd states, "he who is willing and able to take the initiative to exploit variety, rapidity, and harmony—as the basis to create as well as adapt to the more indistinct—more irregular—quicker changes of rhythm and pattern, yet shape the focus and direction of effort—survives and dominates." (p. 174).

[108] Boyd, 7.

[109] Osinga, *Sciecne, Strategy, and War: The Strategic Theory of John Boyd*, 272.

Using the OODA loop as a decision-making framework to conduct maneuver warfare enables Marines to create an advantage while disrupting the enemy from psychological, temporal, and spatial dimensions. By getting inside the enemy's mind, Marines use the temporal dimension to psychologically affect the enemy.[110] Once the psychological affects appear to be insurmountable, the enemy will become vulnerable in the physical and spatial dimensions.[111] Boyd described this process as operating inside an adversary's OODA loop to "get inside their mind-time-space as a basis to penetrate the moral-mental-physical being of their adversaries in order to pull them apart, and bring about their collapse."[112]

C.   MCDP 7 LEARNING

According to MCDP 7, maneuver warfare and the OODA loop are critical elements in building warfighting readiness and require "continuous, disciplined, and progressive learning."[113] Due to the complex nature of war, an intellectual edge is necessary for success.[114] Therefore, "learning is an institutional priority and professional expectation for all Marines."[115] The purpose of *MCDP 7 Learning* is to "describe the Marine Corps' learning philosophy and explain why learning is critically important to the profession of arms."[116] MCDP 7 states, "the Marine Corps' learning philosophy seeks to create a culture of continuous learning and professional competence that yields adaptive leaders capable of successfully conducting maneuver warfare in complex, uncertain, and chaotic environments."[117] In order to create a culture of learning, MCDP 7 identifies four pillars of learning: (1) the nature of learning, (2) the culture of learning, (3) the learning

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[110] Osinga, *Sciecne, Strategy, and War: The Strategic Theory of John Boyd*.

[111] Osinga.

[112] Boyd, "Patterns of Conflict," 101.

[113] U.S. Marine Corps, *Learning*, 4–12.

[114] U.S. Marine Corps, *Warfighting*; U.S. Marine Corps, *Learning*.

[115] U.S. Marine Corps, *Learning*, 4–12.

[116] Berger, "Foreword," 1.

[117] U.S. Marine Corps, *Learning*, 1–3.

environment, and (4) the learning leader.[118] Understanding and integrating the pillars of learning will enable Marines to efficiently and effectively learn the warfighting skills and competencies necessary to execute maneuver warfare and the OODA loop.[119]

1. The Nature of Learning

The first pillar of learning describes what learning is and provides the key principles of learning. MCDP 7 defines "learning" as "developing knowledge, skills, and attitudes through study, experience, or instruction."[120] MCDP 7 explains that the intent of learning should be to understand why something is important.[121] To emphasize that learning is more than simply gathering or memorizing information, MCDP 7 explains that learning includes "cognitive, physical, social, emotional, ethical, and cultural components."[122] Learning occurs in formal and informal settings through both training and education.[123] General Berger states, "while different, education and training are inextricably linked."[124] Expounding upon General Berger's statement, MCDP 7 explains:

> Learning encompasses both training and education, which are equally important and complementary. A simple explanation of the differences between training and education is that training prepares Marines to deal with the known factors of war (e.g., the importance of good marksmanship), while education prepares Marines to deal with the unknown factors (e.g., effective decision-making in changing circumstances). Training and education are accomplished in different ways, but they are both required – working together– to instill the learning that results in readiness and effectiveness.[125]

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[118] U.S. Marine Corps, *Learning*.

[119] U.S. Marine Corps.

[120] U.S. Marine Corps, 1–4.

[121] U.S. Marine Corps, *Learning*.

[122] U.S. Marine Corps, 1–4.

[123] U.S. Marine Corps, *Learning*.

[124] Berger, "Commandant's Planning Guidance: 38th Commandant of the Marine Corps," 16.

[125] David H. Berger, "Commandant's Planning Guidance: 38th Commandant of the Marine Corps," July 16, 2019, 16, https://www.marines.mil/Portals/1/Publications/Commandant's%20Planning%20Guidance_2019.pdf?ver=2019-07-17-090732-937.

Thus, MCDP 7 states "learning is the overall intended outcome of both training and education."[126] MCDP 7 seeks to instill into Marines the idea that they must continuously learn throughout their warfighting career in order to develop their mind as a weapon.[127]

Furthermore, to create a "thinking force that fosters continuous personal and organizational learning," MCDP 7 identifies five key principles of learning.[128] The learning principles for Marines are:

(1)   "Know yourself and seek self-improvement."[129]

(2)   "Be ready and willing to learn."[130]

(3)   "Understand why you are learning."[131]

(4)   "Provide and receive constructive feedback."[132]

(5)   "Learning is purpose-driven to develop professional competence."[133]

According to MCDP 7, the principles of learning should be used by all Marines as a guide to develop cognitive skills such as reasoning, critical thinking, problem solving, judgment, bias for action, and self-awareness to enhance their ability to use maneuver warfare and create an intellectual edge over adversaries.[134]

2.   The Culture of Learning

The second pillar of learning describes the culture necessary to facilitate effective learning. The goal of the Marine Corps culture is to support continuous and career-long

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[126] U.S. Marine Corps, 1–5.

[127] U.S. Marine Corps, *Learning*.

[128] U.S. Marine Corps, 1–9.

[129] U.S. Marine Corps, 1–9.

[130] U.S. Marine Corps, 1–9.

[131] U.S. Marine Corps, 1–9.

[132] U.S. Marine Corps, 1–9.

[133] U.S. Marine Corps, 1–9.

[134] U.S. Marine Corps, *Learning*.

learning for all Marines.[135] MCDP 7 defines organizational culture as the "underlying beliefs, assumptions, values and ways Marines interact that contribute to an organization's unique social and psychological environment."[136] The Marine Corps' culture is defined by "the maneuver warfare philosophy, an expeditionary mindset, and the pursuit of mastery in the profession of arms."[137] MCDP 7 identifies four areas of responsibility involved in developing a culture of learning: (1) Marine (2) instructor (3) commander/leader (4) Marine Corps.[138] The four areas are depicted in Figure 2.
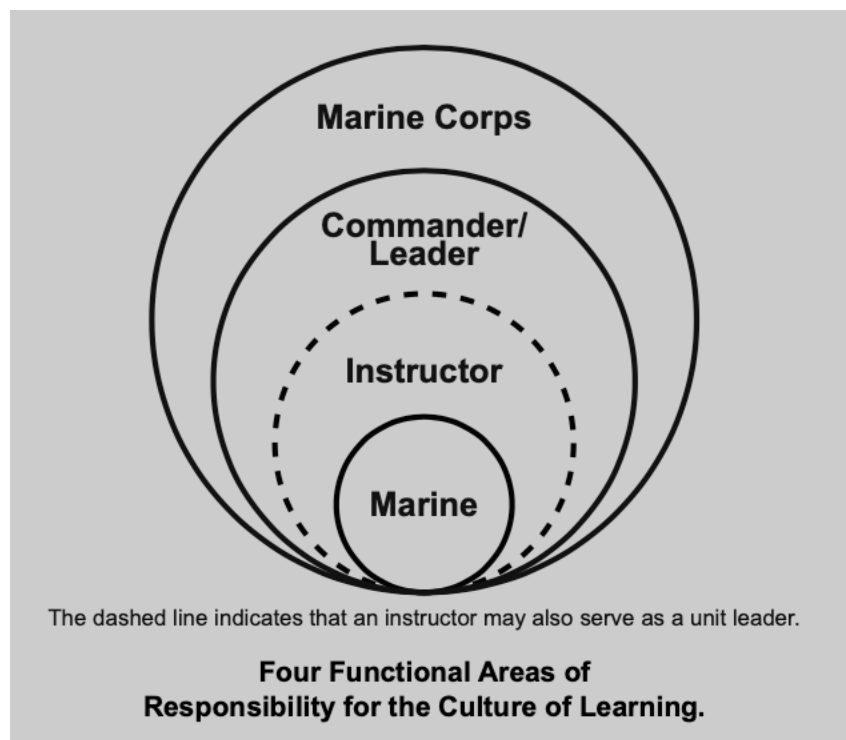
Figure 2.   Four Functional Areas of Responsibility for the
Culture of Learning[139]

[135] U.S. Marine Corps.

[136] U.S. Marine Corps, 2–3.

[137] U.S. Marine Corps, 2–3.

[138] U.S. Marine Corps, 2–9.

[139] Source; U.S. Marine Corps, 2–9.

The first and fundamental functional area of responsibility within a culture of learning is the individual Marine. The Marine is shown as the smallest and innermost circle in Figure 2, which indicates that all functional areas support the Marine. MCDP 7 states, "it is each Marine's responsibility to progress in his or her own self-education."[140]

Building upon the role of the Marine, the second functional area are Marine instructors within formal schools. Instructors are critical for "shaping Marines' attitudes toward learning."[141] For this reason, instructors have a responsibility to become "effective teachers, facilitators, and mentors" for Marines under their charge.[142] Furthermore, it is also their responsibility to continually "develop their instructional skills."[143]

The next functional area are commanders or leaders. Oftentimes, instructors also serve as leaders to Marines. Acting as the third functional area, commanders and leaders are "responsible for setting the conditions within the unit for subordinates' professional military learning and development."[144] Commanders play a vital role in shaping a culture of learning because it is their command programs that set the tone for "commitment to warfighting proficiency, and unit cohesion."[145] More importantly, it is a commander's tolerance for mistakes and errors that will set the conditions for Marines to adapt and innovate through problem-solving, reasoning, and taking initiative.[146] Commanders must also take into account individual and collective skill sets to prepare Marines for "assigned unit responsibilities and the mission."[147] Ultimately, commanders are responsible for tailoring the "unit's learning breadth, scope, and specific experiences."[148]

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[140] U.S. Marine Corps, 2–9.

[141] U.S. Marine Corps, 2–10.

[142] U.S. Marine Corps, 2–10.

[143] U.S. Marine Corps, 2–10.

[144] U.S. Marine Corps, 2–10.

[145] U.S. Marine Corps, 2–10.

[146] U.S. Marine Corps, *Learning*.

[147] U.S. Marine Corps, 2–10.

[148] U.S. Marine Corps, 2–10.

The last functional area is the Marine Corps as an institution. MCDP 7 states the Marine Corps must demonstrate "a focus and commitment to encouraging career-long learning by continuously refining learning methods and providing resources and opportunities for professional development."[149] The culture of learning is developed and "enabled through the Marine Corps' learning-oriented policies, programs and institutional processes."[150] As an institution, the Marine Corps is responsible for continuously seeking improvement with regard to resources, policies, and practices in order to reinforce learning and warfighting readiness.[151]

Collectively, the functional areas are responsible for "creating an environment where continuous learning becomes the standard."[152] Although the Marine Corps is a warfighting organization and physical fitness is critical to its success, Marines must also prioritize mental fitness.[153] General William Mullen III, USMC (Ret.), advocates that equal time and effort should be dedicated to learning as to physical fitness.[154] MCDP 7 explains that learning is a process and that a growth mindset is required to progress professionally.[155] The key to accomplishing career-long learning is to cultivate "the belief that learning is a priority and an enabler for more effective warfighting."[156] In doing so, "Marine Corps culture embraces learning as fundamental to Marine readiness–to be the first to fight."[157]

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[149] U.S. Marine Corps, 2–10.

[150] U.S. Marine Corps, 2–11.

[151] U.S. Marine Corps, *Learning*.

[152] U.S. Marine Corps, 2–5.

[153] U.S. Marine Corps, 2–5.

[154] William F. Mullen III, "PME on PME," https://www.youtube.com/watch?v=QcPSB5Edbx4.

[155] U.S. Marine Corps, *Learning*.

[156] U.S. Marine Corps, 2–14.

[157] U.S. Marine Corps, 2–14.

3.   The Learning Environment

Just as the second pillar anchors the individual Marine, the third pillar does as well. Learning environments should focus on the individual learners' needs in order to enable "Marines to clearly understand the intended warfighting doctrine, concepts, tactics, techniques, procedures, and learning outcomes."[158] MCDP 7 emphasizes that learning environments are not confined to a physical space and should encompass "all the factors that influence instruction, such as methods, resources, technologies, culture, instructors, peers, and the social elements of learning."[159] Since there are a plethora of learning objectives, MCDP 7 recognizes that "there is not a single correct design for creating the ideal learning environment."[160] The critical element to constructing a learning environment is for Marines to adapt and modify learning environments to be effective according to the learner's needs.[161]

In order to effectively create dynamic learning environments, MCDP 7 endorses using a "learner-centric model" in which teaching methods are tailored to each individual Marine as opposed to "defaulting to a 'one-size-fits-all' instructional approach."[162] To that end, learning environments should enable Marines to focus on their individual surfaces and gaps:[163]

> For the Marine learner, surfaces are areas of existing understanding—strongpoints that Marines maintain, build upon, and relate—while gaps are areas of weakness in knowledge, experience, or competencies—areas that the instructor and the learner need to fill with new understanding and practice.[164]

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[158] U.S. Marine Corps, 3–5.

[159] U.S. Marine Corps, 3–4.

[160] U.S. Marine Corps, 3–4.

[161] U.S. Marine Corps, *Learning*.

[162] U.S. Marine Corps, 3–11.

[163] U.S. Marine Corps, *Learning*.

[164] U.S. Marine Corps, 3–7.

The advantage of a learner-centric environment is that Marines are able to analyze their current knowledge and synthesize knowledge to make new connections.[165] Synthesis is made possible by viewing information and situations from different perspectives.[166] Another vital component of a learner-centric environment is utilizing technology to "support, expand, and individualize learning."[167]

In addition to a learner-centric environment, MCDP 7 highlights the importance of self-direct learning, self-reflection, and assessments. MCDP 7 enjoins Marines to engage in self-directed learning, which it defines as "the process in which individuals take the initiative in identifying their learning needs, formulating goals, pursuing these goals, and evaluating outcomes."[168] Another essential element of learning is self-reflection.[169] MCDP 7 explains, "Marines at all levels need time to reflect, absorb, and think about what they have experience to turn it into what they learned."[170] Finally, learning is enhanced by assessments, which provide constructive feedback for learners. MCDP 7 advocates for the use of diagnostic, formative, and summative assessments to use throughout the learning process.[171]

- "Diagnostic assessments identify the learner's knowledge of a subject before a learning activity."[172]

- "Formative assessments provide feedback to the instructor and the learner during the learning activity."[173]

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[165] U.S. Marine Corps, *Learning*.

[166] U.S. Marine Corps.

[167] U.S. Marine Corps, 3–18.

[168] U.S. Marine Corps, 3–13.

[169] U.S. Marine Corps, *Learning*.

[170] U.S. Marine Corps, 3–15.

[171] U.S. Marine Corps, *Learning*.

[172] U.S. Marine Corps, 3–17.

[173] U.S. Marine Corps, *Learning*, MCDP 7 (Washington, DC: Department of the Navy, 2020), 3–17, https://www.marines.mil/Portals/1/Publications/MCDP%207.pdf?ver=2020-03-03-111011-120.

- "Summative assessments identify the learning that occurred after the learning activity has completed."[174]

Self-reflection, assessments, and feedback are valuable to learners because they enable them to "quickly apply the information to develop new understanding, knowledge, and skills."[175] For learning environments to be effective for Marines, it should provide opportunities to engage in continuous learning, apply the lessons learned, and "improve their professional competencies as warfighters."[176]

4. The Learning Leader

The fourth and final pillar of learning is the learning leader. First and foremost, leaders lead by example. MCDP 7 states, "leaders model and set an example of learning for the Marines in their charge by openly seeking out and pursuing professional development for all Marines, *including themselves*."[177] A leader's approach to their own learning and the development of their subordinates sets the overall tone for learning.[178] To foster and encourage learning, leaders should regularly engage with their Marines and take advantage of all learning opportunities by actively seeking teaching moments throughout the day.[179]

Just as leaders are expected to set the example, leaders are also expected to teach and mentor. MCDP 7 explains, "teaching and leading cannot be uncoupled—Marines who cannot teach will struggle as leaders."[180] In order to encourage open discussion, MCDP 7 recommends leaders use the "Socratic method—asking and answering questions to stimulate thinking, draw out ideas, and identify underlying assumptions."[181] Using the

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[174] U.S. Marine Corps, 3–17.

[175] U.S. Marine Corps, 3–18.

[176] U.S. Marine Corps, 3–20.

[177] U.S. Marine Corps, 4–4.

[178] U.S. Marine Corps, *Learning*.

[179] U.S. Marine Corps.

[180] U.S. Marine Corps, 4–5.

[181] U.S. Marine Corps, 4–7.

Socratic method helps leaders to engage in open discussion without providing answers and thus forces the Marine to "develop greater self-awareness."[182]

Finally, MCDP 7 identifies humility as an integral trait for developing a growth mindset and fostering a learning environment.[183] Improving technical and tactical proficiency begins with developing "brilliance in the basics" but skills become increasingly complex as Marines progress throughout their careers.[184] The pursuit of mastery requires Marines to "recognize that they do not know everything, and therefore, must remain humble as they pursue greater understanding and competence."[185] A sense of humility is necessary "to be ready and willing to learn from anyone, at any time, in any place."[186]

D. CONCLUSION

In combining the four pillars of learning, MCDP 7 demonstrates why learning is a fundamental and indispensable element of preparing Marines for the chaotic and ever-changing nature of war. MCDP 7 argues that "the warfighter who recognizes what is happening, adapts to the situation, and then makes effective decisions in the shortest amount of time will typically have an advantage."[187] Therefore, maneuver warfare and the OODA loop are critical drivers of success in warfighting that enable Marines to gain an intellectual advantage against a thinking adversary under time pressure. The ability to efficiently and effectively adapt in any situation requires mental agility that is developed through continuous learning of warfighting skills and competencies. Conclusively, the Marine Corps is the "Nation's first line of defense," which must "always be ready to be the first to fight," and continuous learning is essential to ensuring warfighting readiness.[188]

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[182] U.S. Marine Corps, 4–6.

[183] U.S. Marine Corps, *Learning*.

[184] U.S. Marine Corps.

[185] U.S. Marine Corps, 4–8.

[186] U.S. Marine Corps, 4–11.

[187] U.S. Marine Corps, 1–6.

[188] U.S. Marine Corps, *Learning*.

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III.   LITERATURE REVIEW

> We are now living in a new age in which the demands are so complex, so multifarious and so rapidly changing that the only way in which we shall be able to survive them is by committing to a process of individual, communal, and global learning throughout the lifespan of all of us.
>
> —David Aspin et al[189]

The previous chapter provided background information on why continuous learning is integral to executing maneuver warfare and the OODA loop. Since the effective use of maneuver warfare and the OODA loop are developed through continuous learning, *MCDP 7 Learning* was published to outline the Marine Corps' philosophy on learning. Although MCDP 7's learning philosophy is grounded in neuroscience, psychology, and andragogy, the extent to which it represents the literature on lifelong learning has not been examined. MCDP 7 advocates for "continuous learning," which is a related but different concept. The underlying concept of lifelong learning is that people need to continuously learn because "it is not feasible to equip learners at school, college, or university with all the knowledge and skills they need to prosper throughout their lifetimes."[190]

This chapter presents an overview of the literature regarding lifelong learning from the early 1970s to present day. Resulting from conceptual ambiguity, the concept was first popularly known as "lifelong education" in the 1970s but transitioned to "lifelong learning" in the 1990s. The 21st century marks the near-universal adoption of the term "lifelong learning." Due to the conceptual ambiguity regarding the concept of "lifelong learning," there is no standardized definition. This chapter uses the literature to construct a lifelong learning conceptual framework, comprised of three common themes found within lifelong learning definitions: time frame, purpose, and context.

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[189] David Aspin et al., "Introduction and Overview," in *International Handbook of Lifelong Learning*, Springer International Handbooks of Education 6 (Netherlands: Springer, 2001), xix.

[190] Manuel London, "Lifelong Learning: Introduction," in *The Oxford Handbook of Lifelong Learning*, ed. Manuel London (Oxford University Press, 2011), 4.

A.   LIFELONG EDUCATION

The concept of "lifelong learning" first emerged in the early 1970s in an attempt to restructure and prioritize educational policy; however, the ambiguity of the term sparked various assumptions, definitions and interpretations that have led to conceptual misunderstandings.[191] Organizations such as the United Nations Educational, Scientific, and Cultural Organization (UNESCO), Council of Europe (CoE), and Organization for Economic Cooperation and Development (OECD) began to use lifelong learning and lifelong education interchangeably to create policy, which resulted in several related but different concepts.[192] The problem, as Aspin points out, is that lifelong learning can mean "different things not only in different contexts but also in the same context to different people."[193]

In 1972, UNESCO published *Learning to be* which outlined its vision, policy, and strategy for education. The report argued that the "school of the future" required a fundamental change in which education "no longer focused on the learner, nor anyone, nor anything else. It must necessarily proceed from the learner."[194] Drawing on influences from Athen, the report introduced the concept of "the learning society" where education was the aim of society.[195] It painted a utopian vision of transcending the current model for schools by "broadening the educational function to the dimensions of society as a whole."[196]

> Tomorrow's education must form a co-ordinated totality in which all sectors of society are structurally integrated. It will be universalized and continual. From the point of view of individual people, it will be total and creative, and consequently indvidualised and self-directed. It will be the bulwark and the driving force in culture, as well as in promoting professional activity.

[191] London, "Lifelong Learning: Introduction."

[192] Paul J. Hager, "Concepts and Definitions of Lifelong Learning," in *The Oxford Handbook of Lifelong Learning*, ed. Manuel London (Oxford University Press, 2011).

[193] David N. Aspin, *Philosophical Perspectives on Lifelong Learning* (Springer, 2007), 4.

[194] Edgar Faure et al., "Learning to Be: The World of Education Today and Tomorrow" (United Nations Educational, Scientific and Cultural Organization (UNESCO), 1972), 161.

[195] Edgar Faure et al., "Learning to Be: The World of Education Today and Tomorrow."

[196] Edgar Faure et al., 162.

This movement is irresistible and irreversible. It is the cultural revolution of our time.[197]

To achieve the policy of creating a learning society, UNESCO proposed "lifelong education as the master concept for educational policies."[198] The premise behind the concept is that "every individual must be in a position to keep learning throughout his life" and thus it should encompass "all aspects of education."[199] Although the report advocated that "education must cease being confined within schoolhouse walls"[200] and that "education should be dispensed and acquired through a multiplicity of means,"[201] many of the recommendations focused on improving or maximizing pre-school, general, higher, and vocational education; all of which occur in formal educational settings. Hager notes that the "well-planned and -delivered lifelong education…encouraged the idea that only significantly formal education was relevant."[202] Hager concludes that UNESCO inadvertently emphasized continual attendance of formal education by adopting "lifelong education as the master concept for educational policy."[203]

Similarly, the Council for Cultural Co-operation (CCC) of the CoE conducted fifteen studies on the concept of "education permanente" to assess the implications for changing European society.[204] *Permanent Education: The Basics and* Essentials was a

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[197] Edgar Faure et al., 163.

[198] Edgar Faure et al., 182.

[199] Edgar Faure et al., 181.

[200] Edgar Faure et al., 183.

[201] Edgar Faure et al., 185.

[202] Paul J. Hager, "Concepts and Definitions of Lifelong Learning," in *The Oxford Handbook of Lifelong Learning*, ed. Manuel London (Oxford University Press, 2011), 13.

[203] Hager, 13.

[204] Council for Cultural Cooperation, "Permanent Education: The Basis and Essentials" (Council for Cultural Cooperation, 1973), https://files.eric.ed.gov/fulltext/ED087671.pdf. When translated to English, education permanente becomes permanent education, which lead to the misconception that education should be permanent rather than distributed over a lifetime. The fifteen studies included: Permanent education, an agent of change; A prospective view of permanent education; Continuing education for adults; The organisation and financing of post-work education; Adult motivations to thought structuralisation; Psycho-sociological research into the paths and phases of intellectual maturation and the desire for knowledge; Pre-school education in Europe; Impact on the school of innovations in out-of-school education; Restructuring education; Permanent education and community development; The development of permanent education; Recurrent education; The concept of permanent education and its application;

report that summarized the main ideas and proposals from the fifteen studies. Titz summarizes one aspect of the report, stating "individual needs and collective necessities (social, cultural, economic) in the field of education must not be in opposition but, on the contrary, converge,"[205] which echoed the sentiments from UNESCOs *Learning to Be* report. In order to achieve this, a commitment to lifelong integrated education is required.[206]

> It is not enough simply to prolong the present duration of education and attach more importance to adult education, or to render the school system more open. It is more a question of reforming the structure of the system as a whole. For the efficiency of adult education depends on the quality of the school system.[207]

The goal of education permanente was to "secure a more effective distribution of educational facilities over a lifetime."[208] Education permanente also reinforced receiving education through formal institutions.

In contrast, the OECD introduced the concept of "recurrent education," stating, "education opportunities should be spread out over the individual's lifetime, as an alternative to the ever-lengthening period of continuing education for youth."[209] The report recognized that permanent education was not sustainable; therefore, it should be distributed throughout a person's lifespan, in a "recurring way" as needed.[210] It further deviated from existing concepts at the time by differentiating "learning" from "education" as not identical or having synonymous meaning. Instead, the concept sought to expound upon the

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Sociological motivations and cultural prospects of permanent education; and Permanent education, a strategy of social action.

[205] Jean-Pierre Titz, "The Council of Europe's 'Permanent Education' Project," *European Journal* 6 (n.d.): 46.

[206] Council for Cultural Cooperation, "Permanent Education: The Basis and Essentials."

[207] Council for Cultural Cooperation, 20.

[208] Council for Cultural Cooperation, 20.

[209] Dannis Kallen, "Recurrent Education: A Strategy for Lifelong Learning" (Organisation for Economic Cooperation and Development (OECD), Paris. Centre for Educational Research and Innovation, 1973), 5, https://files.eric.ed.gov/fulltext/ED083365.pdf.

[210] Kallen, "Recurrent Education: A Strategy for Lifelong Learning."

relationship between the two.[211] The OECD explains that, "learning is an essential characteristic of the living organism, necessary for its survival and for its evolution" and "education is organized and structured learning, confined to an intentionally created situation."[212] By drawing these distinctions between "learning" and "education," the OECD broadened the concept of lifelong learning to include informal learning in addition to formal education, arguing that the "learning process is not restricted to any particular situation or environment."[213]

The reason for recurrent education and the shift in educational policy to include informal learning is based on the premise that formal educational systems fail to meet the needs of industry and to provide equal educational opportunities to all.[214] In order to be successful in a complex society, marked by rapid technological development, people must alternate between recurrent formal education and incidental learning through experience.[215] Acknowledging incidental learning enables "the individual to take stock of the experiences he has accumulated, place them in a general context, and test them on their relevance to his own life"[216] in order to facilitate "adaptability through a constant registering and processing of information."[217] Due to the inclusion of informal learning from social situations, the concept of recurrent education was heavily criticized for debasing education.

The emergence of the concept of lifelong learning in the 1970s was marked by enthusiasm to create an ideal society where education was available for all. Although "lifelong education," "education permanente," and "recurrent education" are all related concepts, they each had a different approach to lifelong learning. The different philosophies resulted in conceptual ambiguity, which made it difficult to define.

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[211] Kallen.

[212] Kallen, 17.

[213] Kallen, 18.

[214] Kallen, "Recurrent Education: A Strategy for Lifelong Learning."

[215] Kallen.

[216] Kallen, 19.

[217] Kallen, 18.

Ultimately, the differences in terminology, widespread criticism and conflicting policies led to a significant decline of interest for the concept of lifelong learning and education.

B.   LIFELONG LEARNING

The concept of lifelong learning reemerged in the 1990s undergoing a "second wave" of influence that constitutes the present day concept.[218] Renewed interest in lifelong learning was a result of a perceived economic crisis marked by competition and globalization, specifically from western countries.[219] In order to maintain a competitive advantage, lifelong learning and the ability to develop and apply knowledge continually became the focus of western countries.[220] Field states that the second wave is "marked by an absence of utopian optimism" and instead "marked by a more anxious and uncertain perspective."[221] Echoing this idea, the European Commission (EC) has noted that "lifelong learning is no longer just one aspect of education and training; it must become the guiding principle for provision and participation across the full continuum of learning contexts."[222] Furthermore, Fischer states that "lifelong learning is an essential challenge for inventing the future of our societies; it is a necessity rather than possibility or a luxury to be considered."[223]

The idea that learning is a continuous process that occurs throughout life and beyond formal education led to a shift in policy to focus on learning rather than education or training.[224] The shift to the focus on "learning" was primarily due to the fact that the term "education" was too exclusive and required strict criteria that would not be met in

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[218] Hager, "Concepts and Definitions of Lifelong Learning."

[219] John Field, "Lifelong Learning and Cultural Change: A European Perspective 1.," 2004, https://www.researchgate.net/publication/254032248_Lifelong_Learning_and_Cultural_Change_A_European_Perspective_1.

[220] Field.

[221] Field, 2.

[222] European Commission, "A Memorandum on Lifelong Learning" (Brussels: European Commission, October 30, 2000), 3, https://uil.unesco.org/i/doc/lifelong-learning/policies/european-communities-a-memorandum-on-lifelong-learning.pdf.

[223] Gerhard Fischer, "Lifelong Learning: More than Training," *Journal of Interactive Learning Research* 11, no. 3 (December 1999): 265.

[224] Field, "Lifelong Learning and Cultural Change: A European Perspective 1."

most instances of learning.[225] Since the term "learning" was more inclusive and could be applied to a broader range of contexts, the term "lifelong learning" has been universally adopted.[226] Although the term "continuous" is often used interchangeably with "lifelong," "lifelong learning" is the preferred term in the 21st century. Despite the near universal adoption of the term "lifelong learning," a level of ambiguity remains. Field attributes the ambiguity due to the fact that "the idea of learning is much wider than that of education, and indeed it may be so broad as to pose serious challenges of definition and measurement for policy makers."[227] For this reason, there is still no standardized definition of lifelong learning. Table 1 provides different definitions of lifelong learning to demonstrate the lack of clarity on its meaning.

Table 1.   Lifelong Learning Definitions

Lifelong Learning Definitions	
Definition	Source
"The independent pursuit of learning without formal institutional support or affiliation, and learner-control of instruction."	Philip C. Candy, *Self-Direction for Lifelong Learning. A Comprehensive Guide to Theory and Practice* (San Francisco, CA: Jossey-Bass, 1991).
"Continuous learning that is self-initiated, self-directed, and self-evaluated...and undertaken for the purpose of professional development, personal enhancement or quality of care improvement."	Commission on Dietetic Registration, *Professional Development 2001: Guide to the Proposed Recertification System* (Chicago, Il, 1996), 3.
"Lifelong learning is far broader than the provision of second-chance education and training for adults. It is based on the view that everyone should be able, motivated, and actively encouraged to learn throughout life. This view of learning embraces individual and social development of all kinds and in all	Organisation for Economic Co-operation and Development, "Lifelong Learning to Maintain Employability" (Organisation for Economic Co-operation and Development, October 15, 1997), 5, http://www.oecd/officaldocuments/

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[225] Paul J. Hager, "Concepts and Definitions of Lifelong Learning."

[226] Paul J. Hager.

[227] Field, "Lifelong Learning and Cultural Change: A European Perspective 1.," 1.

Lifelong Learning Definitions	
Definition	**Source**
settings: formally, in schools, vocational, tertiary and adult education institutions; and non-formally, at home, at work and in the community."	publicdisplaydocumentpdf/?cote=OCDE/GD(97)162&docLanguage=En.
"Lifelong learning is the development of human potential through a continuously supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills and understanding they will require throughout their lifetimes and to apply them with confidence, creativity and enjoyment in all roles, circumstances, and environments."	Commission for a Nation of Lifelong Learning, *A National Learning: Vision for the 21st Century* (Washington, DC: Commission for a Nation of Lifelong Learning, 1997), 8.
"All learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective."	European Commission, "Making a European Area of Lifelong Learning a Reality" (Brussels: European Commission, November 21, 2001), 9, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2201:0678:FIN:EN:PDF.
"All forms of learning undertaken by adults after having left initial education and training, however far this process may have gone (e.g., including tertiary education)."	European Commission, "Communication From The Commission: Adult Learning: It Is Never Too Late to Learn" (Brussels: European Commission, October 23, 2006), 2, https://www.dvv-internation.de/en/adult- education-and-development/editions/aed-722009/documents/adult-learning-it-is-never-too-late-to-learn.

Lifelong Learning Definitions	
Definition	**Source**
"The combination of processes throughout a life time whereby the whole person—body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs and senses)—experiences social situations, the perceived content of which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the individual person's biography resulting in a continually changing (or more experienced) person."	Peter Jarvis, *Towards a Comprehensive Theory of Human Learning*, 1st ed., vol. 1, Lifelong Learning and the Learning Society (London: Routledge, 2006), 134.
"Every opportunity made available by any social institution for, and every process by which, an individual can acquire knowledge, skills, attitudes, values, emotions, beliefs and senses within global society."	Peter Jarvis, *Globalisation, Lifelong Learning and the Learning Society: Sociological Perspectives*, 1st ed., vol. 2, Lifelong Learning and the Learning Society (London: Routledge, 2007), 99.
"Development of knowledge and skills that people experience after formal education and throughout their lives."	Manuel London, "Lifelong Learning: Introduction," in *The Oxford Handbook of Lifelong Learning*, ed. Manuel London (Oxford University Press, 2011), 4.
"The entire body of ongoing learning processes, formal or otherwise, whereby people regarded as adults by the society to which they belong develop their abilities, enrich their knowledge and improve their technical or professional qualifications or turn them in a new direction to meet their own needs and those of their society."	Jost Reischmann, "Lifelong and Lifewide Learning: A Perspective," in *Lifelong Education and Lifelong Learning in Thailand* (Thailand, Bangkok: Suwithida Charungkaittikul, 2014), 288, http://www. Reischmannfam.de/lit/2014-Baifern.pdf.

Lifelong Learning Definitions	
Definition	**Source**
"The process of gaining knowledge and skills throughout your life, often to help you do your job properly."	*Cambridge Dictionary*, s.v. "lifelong learning," accessed December 20, 2020, https://dictionary.cambridge.org /us/ dictionary/English/lifelong-learning.
"The provision or use of both formal and informal learning opportunities throughout people's lives in order to foster the continuous development and improvement of the knowledge and skills needed for employment and personal fulfilment."	*Collins Dictionary*, s.v. "lifelong learning," accessed December 20, 2020, https://www. Collinsdictionary.com/us/ dictionary/english/ lifelong-learning.

C.   LIFELONG LEARNING CONCEPTUAL FRAMEWORK

Although the definitions for lifelong learning vary, there are three common themes present in each definition: time frame, context, and purpose, which are used to construct a lifelong learning conceptual framework. The lifelong learning conceptual framework, shown in Figure 3, is used to organize and categorize the concepts of lifelong learning that will be analyzed in this research. The first theme is time frame. The term "lifelong" alludes to learning throughout the entire life span but definitions vary on the specific time period of a person's life. The three time frames are cradle-to-grave, career, and adulthood. The second theme is context, or setting, which describes how and where learning occurs. The three learning contexts are formal, informal, and non-formal. The third theme is purpose, which is the reason or motivation for committing to lifelong learning. The purposes for lifelong learning include personal, professional, economic, democratic, and existential. Since this research seeks to explore how different purposes for learning effect people's commitment to lifelong learning, the existential purpose is not included in the lifelong learning conceptual framework. All of the definitions presented in Table 1 include at least one element from the three themes; however, many definitions incorporate multiple elements across the themes.
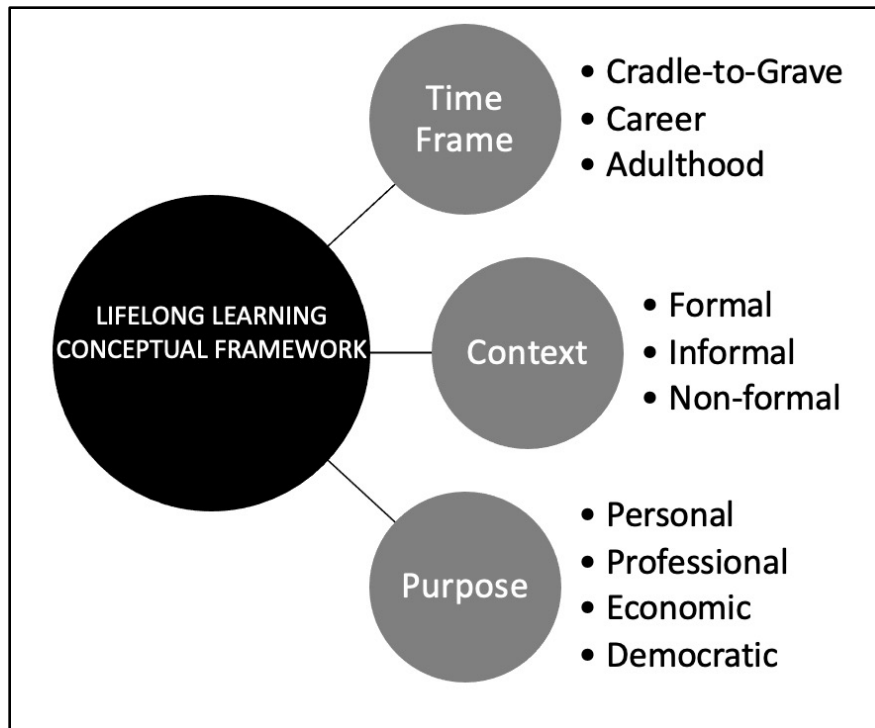
Figure 3.   Lifelong Learning Conceptual Framework

1.   Time Frame

The first theme of the lifelong learning conceptual framework is the time frame considered for learning. The three time frames associated with lifelong learning are cradle-to-grave, career, and adulthood, depicted in Figure 4. Merriam-webster dictionary defines "lifelong" as "lasting for the whole of a person's life."[228] Although all lifelong learning definitions involve learning for extended periods of time throughout a person's life, there are disagreements about when, precisely, lifelong learning should begin and end.

To represent the different lifelong learning time frames, a person's lifespan is separated into three phases: adolescence, career, and post-career. Phase I, adolescence, begins at birth and continues until compulsory education is complete. Phase II, career, begins after compulsory education and ends once a person retires. Phase III, post-career,

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[228] "Lifelong," in *Merriam-Webster Dictionary*, accessed December 20, 2020, https://www.merriam-webster.com/dictionary/lifelong.

starts after a person retires and continues throughout the remainder of their life. Each lifelong learning time frame encompasses different phases of a person's life.
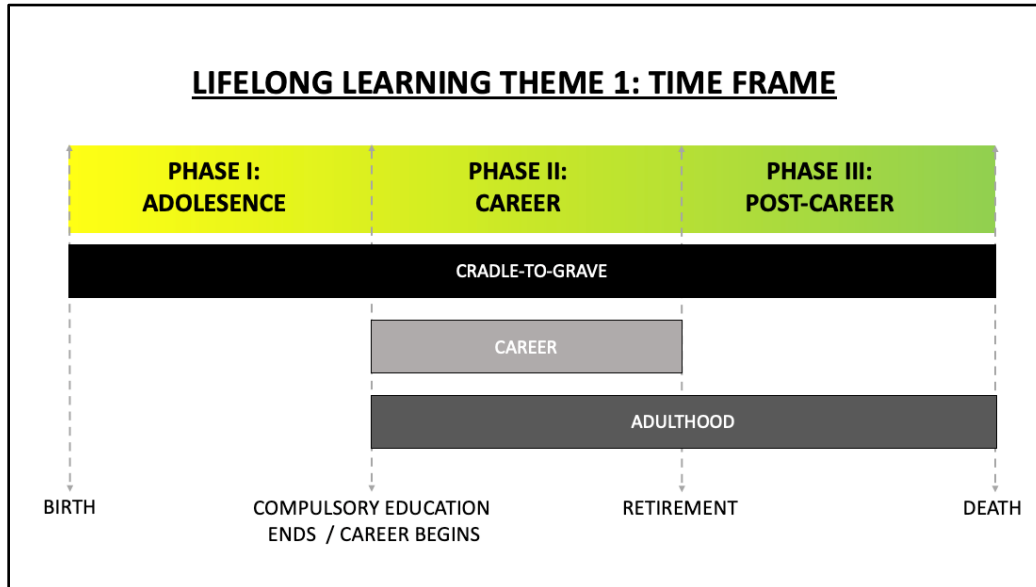
Figure 4.   Lifelong Learning Theme 1: Time Frame

a.   Cradle-to-Grave

The cradle-to-grave time frame for lifelong learning, depicted in Figure 4, encompasses the entire lifespan of a person's life from birth to death. It begins in phase I and continues to the end of phase III. Hargreaves asserts that "lifelong learning is often held to begin when compulsory education ends."[229] However, Hargreaves argues, "lifelong learning should mean what the term plainly says: learning lasts for life—'cradle to grave' and so begins when we are born."[230] He explains that people's learning experiences early in life largely influence their ability and willingness to continue learning after compulsory education.[231] Hargreaves states, "the foundations of lifelong learning are

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[229] David H. Hargreaves, *Learning for Life: The Foundations for Lifelong Learning* (Policy Press, 2004), 1, 978-1861345974.

[230] Hargreaves, 1.

[231] Hargreaves, *Learning for Life: The Foundations for Lifelong Learning*.

laid during these years."[232] Therefore, lifelong learning should not be considered as starting after compulsory education but rather as a process starting when born and lasting throughout life until death.[233] Similarly, the EC advocates for a cradle-to-grave approach where lifelong learning is regarded as a "seamless continuum."[234] The EC explains that a "high quality basic education" beginning as a child is necessary to set an "essential foundation."[235] Adults can then build upon the foundation for the remainder of their life.

b.   Career

The career time frame for lifelong learning is represented as phase II in Figure 4. It is the shortest of all three time frames. The career time frame begins after compulsory education is complete and lasts throughout an adult's working life. The time frame ends once a person retires from their career and is no longer required to work.

c.   Adulthood

The adulthood time frame, depicted in Figure 4, includes phase II and phase III of a person's life. Similar to the career time frame, the adulthood time frame begins in phase II after compulsory education is complete. However, this time frame does not stop in phase II at the end of a person's career, but continues throughout phase III.

2.   Context

The second theme in the lifelong learning conceptual framework is context, which involves the circumstances or settings that learning occurs in. Since the term "lifelong" refers to time, the EC coined the term "lifewide" to encompass the full range of activities and situations that learning can take place.[236] The three different learning contexts are formal, informal, and non-formal. Although the terms "lifelong education" and "lifelong learning" both encompassed learning through formal settings, only "lifelong learning"

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[232] Hargreaves, 1.

[233] Hargreaves, *Learning for Life: The Foundations for Lifelong Learning.*

[234] European Commission, "A Memorandum on Lifelong Learning," 7.

[235] European Commission, 7.

[236] European Commission, 9.

recognized learning from informal settings. After the transition to "lifelong learning," the EC included a third context, non-formal learning.[237] The inclusion or exclusion of certain learning contexts vary among definitions for lifelong learning, but most definitions include at least one of the following contexts.

a.   Formal

The EC defines formal learning as "learning typically provided by an education or training institution, structured (in terms of learning objectives, learning time or learning support) and leading to certification."[238] From the "learner's perspective," learning is "intentional."[239] Formal learning is most commonly associated with organized learning in a classroom led by an instructor.

b.   Informal

The EC defines informal learning as "learning resulting from daily life activities related to work, family or leisure. It is not structured (in terms of learning objectives, learning time or learning support) and typically does not lead to certification."[240] Although informal learning can be "intentional," it is often "non-intentional."[241] In most cases, it is "incidental" or "random."[242] Since informal learning can occur non-intentionally, the EC explains it may "not be recognised even by individuals themselves as contributing to their knowledge and skills."[243]

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[237] European Commission, "Making a European Area of Lifelong Learning a Reality" (Brussels: European Commission, November 21, 2001), https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2001:0678:FIN:EN:PDF.

[238] European Commission, 32.

[239] European Commission, 32.

[240] European Commission, 32.

[241] European Commission, 32.

[242] European Commission, 32.

[243] European Commission, "A Memorandum on Lifelong Learning," 8.

c.   Non-formal

The EC defines non-formal learning as "learning that is not provided by an education or training institution and typically does not lead to certification. It is, however, structured (in terms of learning objectives, learning time or learning support)."[244] According to the EC, "non-formal learning is intentional from the learners perspective."[245] The EC explains that non-formal learning should complement formal education by taking place "alongside the mainstream systems of education."[246]

3.   Purpose

The third theme in the lifelong learning conceptual framework is purpose, which describes the reason or motivation for learning. The purposes for lifelong learning include personal, professional, economic, and democratic. In contrast, there is also an argument that learning does not need to have a purpose because it is an existential phenomenon, that is a naturally occurring part of being human.[247] Since this study seeks to examine how purposes for learning can enhance MCDP 7's learning philosophy, the existential literature is not included in the lifelong learning conceptual framework.

a.   Personal

The purpose of lifelong learning, from an individualistic perspective, is on personal fulfilment, growth, and development. Barrow and Keeney draw from Plato to demonstrate that the idea of lifelong learning is not a new phenomenon. Barrow and Keeney summarize Plato by stating "education is an intellectual and character-forming business, rather than a mere acquisition of skills or mastery of trade, and that its ideal length or scope is not to be estimated by reference to any amount of information to be ingested, but to the need to

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[244] European Commission, "Making a European Area of Lifelong Learning a Reality," 33.

[245] European Commission, 32.

[246] European Commission, "A Memorandum on Lifelong Learning," 8.

[247] Peter Jarvis, "Lifelong Learning: A Social Ambiguity," in *The Routledge International Handbook of Lifelong Learning*, ed. Peter Jarvis (New York, NY: Routledge, 2009), 9–18; Kallen, "Recurrent Education: A Strategy for Lifelong Learning."

ascend to ever higher and more abstract levels of understanding."[248] Expounding on this idea, Barrow and Keeney assert that education and learning should be undertaken for personal fulfillment. They explain that "to be fulfilled means to feel satisfaction in achievement related to aspects of life that one values."[249] The authors draw a link between education, personal fulfilment, and developing the mind by stating:

> In continuing to educate oneself throughout life, one increases one's understanding. This is not a question of amassing new information nor, necessarily, or exploring new subject matter, so much as of increasing one's grasp of the nature of various distinct types of inquiry. That more sophisticated and deeper understanding in turn allows for a development of appreciation and engagement. And it is in the capacity to understand, appreciate and engage with the world that we most fully realise our human, as opposed to our animal, selves.[250]

Therefore, learning is linked to fulfilment, which cannot be met through achievement of objective criteria, but rather with a "subjective sense of satisfaction."[251]

Furthermore, Bagnall identifies four additional personal purposes for learning known as the individual progressive sentiment as shown in Table 2.[252] Bagnall argues that individuals make "liberatory commitments" in regard to ignorance, dependence, constraint, or inadequacy.[253] Each liberatory commitment focuses on a specific purpose for

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[248] Robin St. C. Barrow and Patrick Keeney, "The Changing University, Lifelong Learning, and Personal Fulfillment," in *Second International Handbook of Lifelong Learning*, ed. David Aspin et al., Springer International Handbooks of Education 26 (Netherlands: Springer, 2012), 37.

[249] Barrow and Keeney, 44.

[250] Barrow and Keeney, 44.

[251] Barrow and Keeney, 44.

[252] Richard Bagnall, "Locating Lifelong Learning and Education in Contemporary Currents of Thought and Culture," in *International Handbook of Lifelong Learning*, ed. David Aspin et al., Springer International Handbooks of Education 6 (Netherlands: Springer, 2001), 35–52. The author notes, "although this sentiment focuses on individual development, it nevertheless tends to frame a perception of public benefit from education. This benefit is seen as being through the development of individuals who are more functionally independent, culturally informed and publicly aware" (p. 36).

[253] Bagnall.

education.[254] Moreover, each purpose for education will lead to a different reason for adopting lifelong learning.[255]

The first liberatory commitment is the liberation from constraint. The purpose for education is to gain individual cognitive enlightenment.[256] The focus is on "cognitive or intellectual development and understanding."[257] Bagnall explains that this is typically gained from "academic disciplines," however, it does not necessarily have to be.[258] Hager summarizes that the reason for adopting lifelong learning is to remain knowledgeable.[259] He states: "the sheer breadth, depth and ever expanding nature of human knowledge requires continuous learning."[260]

Table 2.   Bagnall's Individual Progressive Sentiment[261]

Liberatory Commitment	Purpose for Education	Reason for Lifelong Learning
Liberation from Ignorance	Individual Cognitive Enlightenment	"The sheer breadth, depth and ever-expanding nature of human knowledge requires continuous learning if individuals are to remain knowledgeable."[262]
Liberation from Dependence	Individual Empowerment	"The changing developmental needs of people to remain in control of their lives at different stages requires capacities to learn new skills and apply these learned skills effectively to novel situations."[263]

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[254] Bagnall.

[255] Hager, "Concepts and Definitions of Lifelong Learning."

[256] Bagnall, "Locating Lifelong Learning and Education in Contemporary Currents of Thought and Culture."

[257] Bagnall, 36.

[258] Bagnall, 36.

[259] Hager, "Concepts and Definitions of Lifelong Learning."

[260] Hager, 14.

[261] Adapted from Bagnall, "Locating Lifelong Learning and Education in Contemporary Currents of Thought and Culture"; Hager, "Concepts and Definitions of Lifelong Learning," 14.

[262] Hager, "Concepts and Definitions of Lifelong Learning," 14.

[263] Hager, 14.

Liberatory Commitment	Purpose for Education	Reason for Lifelong Learning
Liberation from Constraint	Individual Transformation	"The ongoing need for educational transformation of individuals to counter conformism requires ongoing understanding of and sensitivity to social and cultural trends."[264]
Liberation from Inadequacy	Individual Personal Development	"The endless process of human growth in an evolving social world requires capacities to monitor and evaluate learning outcomes and to reformulate actions according to outcomes."[265]

The second liberatory commitment is the liberation from dependence. The purpose for education is individual empowerment.[266] The focus is on developing skills and "socialization into social conventions and conventions." According to Hager, the purpose for adopting lifelong learning is for autonomy.[267] People must develop the capacity to learn new skills and apply them in life.[268] More importantly, is the ability to transfer the learned skills to new situations in order to remain in control throughout the different stages of their lives.[269]

The third liberatory commitment is the liberation from constraint. The purpose of education is individual transformation in which the focus is to transcend beyond existing "frameworks of individual understanding and capability." [270] Bagnall explains that these

[264] Hager, 14.

[265] Hager, 14.

[266] Bagnall, "Locating Lifelong Learning and Education in Contemporary Currents of Thought and Culture."

[267] Hager, "Concepts and Definitions of Lifelong Learning."

[268] Bagnall, "Locating Lifelong Learning and Education in Contemporary Currents of Thought and Culture."

[269] Hager, "Concepts and Definitions of Lifelong Learning," 14.

[270] Bagnall, "Locating Lifelong Learning and Education in Contemporary Currents of Thought and Culture."

frameworks are "acquired through passive acculturation," therefore, individuals must be aware and sensitive to social and cultural trends.[271] The reason to adopt lifelong learning is to "counter conformism."[272]

The fourth liberatory commitment is the liberation from inadequacy. The purpose for education is personal development with a particular emphasis on experiential learning.[273] Hager elaborates by stating, "the endless process of human growth in an evolving social world requires capacities to monitor and evaluate learning outcomes and to reformulate actions according to outcomes."[274]

b.   Professional

Professional drivers of lifelong learning focus on education, training, and learning in the area of a person's vocation.[275] Leicester states that "professional development must… be career long and involve ongoing reflexive reflections on the professional's own practice in ever changing contexts."[276] Furthermore, Boshier believes that lifelong learning is "nested in an ideology of vocationalism."[277] He states that "learning is for acquiring skills that will enable the learner to work harder, faster, and smarter."[278]

Echoing the sentiment for the development of vocational skills, London and Smither introduce the concept of career-related continuous learning (CRCL), which they define as "an individual-level process characterized by a self-initiated, discretionary, planned, and proactive pattern of formal (e.g., institutional) or informal activities that are

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[271] Bagnall, 36; Hager, "Concepts and Definitions of Lifelong Learning."

[272] Hager, "Concepts and Definitions of Lifelong Learning," 14.

[273] Bagnall, "Locating Lifelong Learning and Education in Contemporary Currents of Thought and Culture."

[274] Hager, "Concepts and Definitions of Lifelong Learning," 14.

[275] Mal Leicester, "Continuing Professional Development and the Triadic Conception of Lifelong Learning," in *Second International Handbook of Lifelong Learning*, ed. David Aspin et al., Springer International Handbooks of Education 26 (Netherlands: Springer, 2012), 131.

[276] Leicester, 133.

[277] Roger Boshier, "Edgar Faure After 25 Years: Down But Not Out," in *International Perspectives on Lifelong Learning*, ed. John Holford, Peter Jarvis, and Colin Griffin (London: Routledge, 1998), 3–20.

[278] Boshier, 8.

sustained over time and have the goal of applying or transporting knowledge (including tacit knowledge) for career development today or in the future."[279] CRCL involves pre-learning, learning, and the application of learning.[280] Pre-learning involves recognizing that there is a need for continuous learning.[281] Learning involves acquiring formal knowledge and tactic knowledge.[282] The application of learning involves using and evaluating knowledge or skills in order to "reap the benefits of learning."[283] The authors argue that CRCL "make [s] an important contribution to career success."[284]

Similarly, the Construction Industry Council (CIC) advocates for continuing professional development (CPD). CPD is defined as "the systematic maintenance, improvement and broadening of knowledge and skill and the development of personal qualities necessary for execution of professional and technical duties throughout the practitioner's working life."[285] Friedman and Phillips summarize literature on CDP by stating that it is:

- "Lifelong learning for professionals."[286]

- "A means of personal development."[287]

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[279] Manuel London and James W. Smither, "Career-Related Continuous Learning: Defining the Construct and Mapping the Process," in *Research in Personnel and Human Resources Management*, vol. 17 (Stamford, CT: JAI Press Inc, n.d.), 83.

[280] London and Smither, "Career-Related Continuous Learning: Defining the Construct and Mapping the Process."

[281] London and Smither.

[282] London and Smither.

[283] London and Smither, 81.

[284] London and Smither, 83.

[285] Construction Industry Council, "Information Sheets for the Professional Institution Members of the CPD in Construction Group" (Construction Industry Council, 1986), 3.

[286] Andrew Friedman and Phillips, Mary, "Continuing Professional Development: Developing a Vision," *Journal of Education and Work* 17, no. 3 (September 2004): 362, http://dx.doi.org/10.1080/1363908042000267432.

[287] Friedman and Phillips, Mary, 362.

- "A means for individual professionals to ensure a measure of control and security in the often precarious modern workplace."[288]

- "A means of assuring a wary public that professionals are indeed up-to-date, given the rapid pace of technological advancement."[289]

- "A means whereby professional associations are indeed up-to-date, given professionals are being upheld."[290]

- "A means for employers to garner a competent, adaptable workforce."[291]

CPD combines technical competence with personal qualities to improve overall professional competency.[292] The aim of CPD is to improve personal performance and enhance career progression.[293]

c.   Economic

According to Aspin et al., the economic purpose is for "the promotion of skills and competences necessary for the development of general capabilities and specific performance in roles, activities and tasks that relate primarily, or in some cases entirely, to economic development and performance."[294] Similar to the professional purpose, the economic purpose emphasizes individuals learning skills in their profession. However, the overarching goal is for the individual's profession to benefit the economy and stimulate economic growth.

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[288] Friedman and Phillips, Mary, 362.

[289] Friedman and Phillips, Mary, 362.

[290] Friedman and Phillips, Mary, 362.

[291] Friedman and Phillips, Mary, 362.

[292] Friedman and Phillips, Mary, "Continuing Professional Development: Developing a Vision."

[293] Friedman and Phillips, Mary.

[294] David Aspin et al., "Introduction and Overview," in *International Handbook of Lifelong Learning*, Springer International Handbooks of Education 6 (Netherlands: Springer, 2001), xvii.

d.   Democratic

The democratic purpose for learning encompasses "increasing democratic participation, social inclusion and enhancing the quality of life of individual members of society."[295] Learning and education should be undertaken to promote "justice" and "equity" for all.[296]

e.   Existential

In contrast, learning can be regarded as existential and thus does not need a purpose. Learning as a humanistic quality was a key principle for constructing a distinction between "learning" and "education" for recurrent education. Kallen states, "learning is an essential characteristic of the living organism, necessary for its survival and for its evolution."[297] Kallen's purpose for distinguishing learning as a humanistic quality was to emphasize that "man learns in all his life situations;" therefore, learning should include informal settings in addition to formal education.[298]

Jarvis expounded upon this idea and considers learning to be an "existential phenomenon" and "one of the driving forces of human living."[299] Essentially, learning is a byproduct of consciousness.[300] Jarvis' purpose for distinguishing learning as an existential phenomenon is to highlight that learning does not need an objective since it occurs naturally and does not require conscious effort.[301] Jarvis argues, "lifelong learning is neither incidental to living nor instrumental in itself—it is an intrinsic part of the process of living."[302] A key distinction is that Jarvis defines lifelong learning from an

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[295] Judith D. Chapman and David N. Aspin, *The School, The Community and Lifelong Learning* (London and Washington: Cassell, 1997), 75.

[296] Chapman and Aspin, 27.

[297] Kallen, "Recurrent Education: A Strategy for Lifelong Learning," 17.

[298] Kallen, 17.

[299] Jarvis, "Lifelong Learning: A Social Ambiguity," 10.

[300] Jarvis, "Lifelong Learning: A Social Ambiguity."

[301] Jarvis.

[302] Jarvis, 10.

individualistic perspective, rather than a social perspective.[303] If lifelong learning is considered from an individualistic perspective, it does not need to have a purpose, though it typically does.[304]

D.   CONCLUSION

The concept of "lifelong learning" as a policy first became popularized in the 1970s, commonly referred to as the "first wave," but focused on lifelong education rather than lifelong learning.[305] Conceptual ambiguity resulted in a marked decline of interest until lifelong learning went through a "second wave" in the 1990s.[306] Although the term "lifelong learning" is near-universally adopted, there is no universal definition. Nevertheless, there are three themes common among all definitions for lifelong learning, which were used to construct the lifelong learning conceptual framework: time frame, context, and purpose. The first theme is the time frame that learning occurs, and each varies in regard to when learning should begin and end. The three time frames for lifelong learning are cradle-to-grave, career, and adulthood. The second theme is context, which describes where and how learning occurs. The three contexts for lifelong learning are formal, informal, and non-formal. The third theme is purpose, which explains the reason why a person should learn. The lifelong learning purposes are personal, professional, economic, and democratic. The lifelong learning conceptual framework will be utilized to analyze MCDP 7 and the Benjamin Franklin case study.

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[303] Jarvis, "Lifelong Learning: A Social Ambiguity."

[304] Jarvis.

[305] Hager, "Concepts and Definitions of Lifelong Learning."

[306] Hager.

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IV.   BENJAMIN FRANKLIN CASE STUDY

An investment in knowledge pays the best interest.

—Benjamin Franklin[307]

The previous chapter provided a literature review on lifelong learning, which was used to construct the lifelong learning conceptual framework. The lifelong learning conceptual framework includes three themes: time frame, context, and purpose. To provide an example of a person who achieved extraordinary success through his commitment to lifelong learning, this chapter presents a case study on Benjamin Franklin. The case study will be used as a base of comparison to MCDP 7 using the lifelong learning conceptual framework. Franklin was an American printer, publisher, author, inventor, scientist, and diplomat. Furthermore, he is considered one of the seven Founding Fathers of the United States for his remarkable contributions toward the development of the United States' government in the late eighteenth century. Franklin is a useful case study because he exhibits learning across all three themes of lifelong learning as well as the different subcategories within each theme.

The case study is composed of three sections: adolescence, career, and post-career. These subsections correspond to the three phases of a person's lifespan in the time frame theme from the lifelong learning conceptual framework. The adolescence section corresponds to phase 1 and is used to examine Franklin's learning during compulsory education. The career section corresponds to phase 2 and examines Franklin's learning in his career as a printer. The post-career section corresponds to phase 3 and is used to explore Franklin's learning after retirement. Throughout each time frame, Franklin uses different contexts (formal, informal, and non-formal) and purposes (personal, professional, economic, democratic) for learning to adapt to the environment and ultimately achieve success.

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[307] Benjamin Franklin, *The Way to Wealth* (Carlisle, MA: Applewood Books, 1986).

A.   ADOLESCENCE

This section represents phase 1 of a person's lifespan—adolescence. It begins once a person is born and continues until compulsory education is complete. Although Franklin's compulsory education was short, he continued to learn informally and non-formally throughout his adolescence until he began his career as a printer.

1.   Formal Education

Franklin's lack of formal education deviates from the norm in the 21st century, where most individuals receive years of compulsory education as an adolescent. Furthermore, he did not attend college, and he did not receive formal training throughout his career. The only formal education Franklin received consisted of two years of school from ages eight to ten. Franklin was a precocious child who learned to read at an early age, which led his father, Josiah Franklin, to believe he would make a good scholar.[308] While his elder brothers had apprenticeships for different trades, Franklin was sent to the Boston Latin School at age eight. Although he started in the middle of his class, he gradually made his way to the top of the class and eventually into the next grade above it. Despite Franklin's success in his first year of school, Josiah decided to withdraw him after realizing he could not afford a college education.[309] Instead, he sent Franklin to "a school for writing and arithmetic" taught by George Brownell.[310] Franklin excelled in writing but failed in math so his father removed him after one year. After only two years of education, the only formal education he would receive in his life, Franklin went to work with his father to learn the chandler trade.

2.   Learning from Books

In order to make up for his lack of formal education, Franklin relied heavily on non-formal learning by reading books. Despite being taken out of school, Franklin's eagerness

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[308] Benjamin Franklin, *The Autobiography of Benjamin Franklin* (University Park, PA: The Pennsylvania State University Press, 1998).

[309] Franklin.

[310] Franklin, 10.

to learn and read continued. Books had an influential impact on Franklin as a young boy and would continue to throughout his life. Arthur Tourtellot attributes Franklin's success to reading and states, "the chief force in shaping the latent genius in Franklin was his insatiable appetite for books."[311] In addition to his desire to read, Tourtellot states Franklin "was always highly purposeful in his reading;…he was always eager that his reading be turned to good account so far as his own development went."[312] From a young age, Franklin made reading books a priority toward which he dedicated both his time and money. Franklin recalled, "all the little money that came into my hands was ever laid out in books."[313] Franklin names four books in his autobiography that he was particularly fond of: *The Pilgrim's Progress, Parallel Lives of the Noble Greeks and Romans Plutarch's Lives, Bonifacius, an Essay upon the Good, that is to be Devised and Designed, by Those Who Desire to Answer the Great End of Life, and to Do Good while They Live and An Essay Upon Projects: Effectual Ways for Advancing the Interests of the Nation.*[314] Franklin's reading as a young child had a profound effect on his life because it shaped his outlook on how he should live his life.

Franklin's lifelong determination and dedication to progress was largely due to the book *The Pilgrim's Progress. The Pilgrim's Progress*, by John Bunyan, is a religious allegory about a man's pilgrimage through life. A central theme in the book is represented in the title, "progress," which showed a person could move forward in life and overcome any obstacles or adversity. Tourtellot credits this book for the reason why "a sense of progress was to become the central motif of Franklin's life, the force behind it, the object before it, the very substance of it."[315] Although Franklin enjoyed reading *The Pilgrim's Progress* for personal pleasure, he also learned tremendous life lessons from the book as well. Thus, his commitment to non-formal learning through reading books began with *The Pilgrim's Progress.*

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[311] Arthur B Tourtellot, *Benjamin Franklin: The Shaping of Genius: The Boston Years* (New York, NY: Doubleday, 1977), 165.

[312] Tourtellot, 180.

[313] Franklin, *The Autobiography of Benjamin Franklin*, 13.

[314] Franklin, *The Autobiography of Benjamin Franklin*.

[315] Tourtellot, *Benjamin Franklin: The Shaping of Genius: The Boston Years*, 175.

Building upon the idea of progress, *Parallel Lives of the Noble Greeks and Romans* (also known as Plutarch's Lives), by Plutarch, demonstrated the importance of character and the power of self-improvement to Franklin. Plutarch's Lives consists of forty-eight biographies of famous Greeks and Romans, in which the author judges their character, good and bad, through the remarkable events in each of their lives.[316] He accentuates their moral virtues and failures. Franklin recalls, "I read [it] abundantly, and I still think that time spent to great advantage."[317] Tourtellot asserts that the chapter on Pericles' life had a strong influence on Franklin's belief in self-improvement.[318] He quotes Plutarch's statement that "in the exercise of his mental perception, every man, if he chooses, has a natural power to turn himself upon all occasions, and to change and shift with the greatest ease to what he himself shall judge desirable."[319] Biographer Walter Isaacson states that Plutarch's Lives is "based on the premise that individual endeavor can change the course of history for the better."[320] While Franklin found reading about the lives of these men to be enjoyable, Plutarch's lives also instilled in Franklin the belief in his ability to become the person he wanted to be through self-improvement and living a practical and productive life.

To further his desire to live a productive life, Franklin believed his actions could have the biggest impact through projects, which were influenced by *An Essay Upon Projects: Effectual Ways for Advancing the Interests of the Nation* (also known as *Essay on Projects*), by Daniel Defoe. In *Essay on Projects*, Defoe urged for social "projects"

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[316] Plutarch, *Parallel Lives Complete* (New York, NY: Start Publishing LLC, 2012). In the chapter "Life of Alexander," Plutarch states, "I am writing [a] biography, not history; and often a man's most brilliant actions prove nothing as to his true character, while some trifling incident, some casual remark of jest, will throw more light upon what manner of man he was than the bloodiest battle, the greatest array of armies, or the most importance siege."

[317] Franklin, *The Autobiography of Benjamin Franklin*, 13.

[318] Tourtellot, *Benjamin Franklin: The Shaping of Genius: The Boston Years*.

[319] Tourtellot, 181.

[320] Walter Isaacson, *Benjamin Franklin: An American Life* (New York, NY: Simon & Schuster, 2003), 25.

necessary for society.[321] Tourtellot describes Defoe's writing as appealing to reason; therefore, Defoe was not interested in analysis for its own sake but rather to enlighten oneself for a specific purpose.[322] Since *Essay on Projects* heavily influenced Franklin, he adopted a similar attitude of exploring things for a practical purpose rather than merely for the sake of learning as well. Furthermore, Tourtellot states that they both believed "the point was to see the problem clearly, realistically, and without any bias save toward the good, and then to find a means that was workable to achieve that good."[323] Tourtellot concludes that they believed the world would be "best advanced by equitable and decent behavior among men."[324] As a result of this belief, many of the ideas for the numerous projects Franklin oversaw throughout his life manifested from this book.

Expanding his impact beyond projects, Franklin believed all of his actions should benefit society as well. Bonifacius, an Essay upon the Good, that is to be Devised and Designed, by Those Who Desire to Answer the Great End of Life, and to Do Good while They Live (also known as Essays to Do Good), by Reverend Cotton Mather, was instrumental in forming a sense of duty in Franklin to do good.[325] When reflecting upon the impact the book had on his life, Franklin states, "[it] gave me a turn of thinking that had an influence on some of the principal future events of my life."[326] Tourtellot asserts that Mather's writing instilled in Franklin a "common instinct 'to do good' –i.e., to live

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[321] Daniel Defoe, *An Essay Upon Projects*, ed. Henry Morley, 2014, https://www.gutenberg.org/files/4087/4087-h/4087-h.htm. Essay Upon Projects was first published in May 1698 but was considered ahead of its time and went through many editions. Examples of projects that Defoe argued for are: stock swindles, the regulation of banking, tax reform, the establishment of highway commissions, insurance against losses, fire, and faulty real estate titles, co-operatives to aid widows; pensions to provide security for the aged; organized medical aid for the afflicted; reforms against bankruptcy procedures; a royal academy to provide properly educated personnel for the military; quasi-judicial commissions to deal with problems requiring expertise beyond the competence of ordinary courts; a central source of man power to recruit seamen without resort to bribery in the case of merchantmen and the gross evils of impressment in the case of the navy.

[322] Tourtellot, *Benjamin Franklin: The Shaping of Genius: The Boston Years*, 184.

[323] Tourtellot, 184.

[324] Tourtellot, 182.

[325] Reverend Cotton Mather lived less than half a mile away from Franklin. Franklin grew up listening to his sermons, and would borrow books from Mather's personal library.

[326] Franklin, *The Autobiography of Benjamin Franklin*, 14.

lives of usefulness to their fellow man."[327] In a letter to Samuel Mather, Cotton Mather's son, Franklin tells him that reading Essays to Do Good is the reason why he has "always set a greater value on the character of a doer of good, than on any other kind of reputation."[328] This belief in the need to do good is seen throughout Franklin's life and is a large reason why Tourtellot states "he attached primary importance to the welfare and progress of the community."[329] Essays to Do Good had such a profound effect on Franklin that he attributes the deeds of his public service throughout his life to it. He proclaims that if people believe him to be "a useful citizen, the publick owes the advantage of it to that book."[330]

3.   Experiments

Further examples of non-formal and informal learning can be seen in Franklin's life through the experiments he conducted in which he learned via a continuous loop of observing a situation and adapting his behavior based on the feedback. Franklin's playful curiosity and desire to conduct experiments first manifested when he was a young boy through his love for swimming. Swimming was the one leisure activity that Franklin enjoyed and engaged in throughout his life. Showing his ability to learn from informal situations, Franklin observed that the power to propel himself forward was generated by his hands and feet. To test his hypothesis, Franklin exhibited non-formal learning by conducting experiments to see if he could swim faster. Franklin made "two oval palettes, each about ten inches long and six broad, with a hole for the thumb, in order to retain it" in the palms of his hands in order to increase the surface area and generate more power.[331] In a letter to Jacques Barbeu-Dubourg, Franklin states, "I remember I swam faster by

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[327] Tourtellot, *Benjamin Franklin: The Shaping of Genius: The Boston Years*, 187.

[328] Benjamin Franklin, "Benjamin Franklin to Samuel Mather," May 12, 1784, https://franklinpapers.org/framedNames.jsp.

[329] Tourtellot, *Benjamin Franklin: The Shaping of Genius: The Boston Years*, 188.

[330] Franklin, "Benjamin Franklin to Samuel Mather," May 12, 1784.

[331] Benjamin Franklin, *The Works of Benjamin Franklin, Vol. V Letters and Misc. Writings 1768-1772*, ed. John Bigelow, vol. 5 (Indianapolis, Indiana: The Online Library of Liberty, 2013), 11, https://oll.libertyfund.org/title/bigelow-the-works-of-benjamin-franklin-vol-v-letters-and-misc-writings-1768-1772.

means of these palettes, but they fatigued my wrists."[332] Franklin also created "palettes" to attach to the bottom of his feet but he "observed that the stroke is partly given by the inside of the feet and the ankles, and not entirely with the soles of the feet."[333] Overall, Franklin recalled that he "was not satisfied with them."[334] Without any scientific knowledge, Franklin was able to informally learn by using his observations and real life feedback. He then used non-formal learning by conducting experiments to try different methods to improve his swimming. Thus, these early experiments mark the formation of a mindset in Franklin that would continue throughout his life; that he was not concerned with why something was occurring, just whether or not he could find a practical use for it. Furthermore, it demonstrates the interaction between Franklin's informal and non-formal learning where his observations from the world led to an experiment to test a hypothesis.

In a second attempt to make swimming easier, Franklin let a paper kite ascend over a pond, attached a stick to the string holding it, and got into the water. He states, "I found that, lying on my back and holding the stick in my hands, I was drawn along the surface of the water in a very agreeable manner."[335] Franklin further recalled, "I began to cross the pond with my kite, which carried me quite over without the least fatigue, and with the greatest pleasure imaginable."[336] These experiments with palettes and the paper kite demonstrate Franklin's eagerness to experiment. Furthermore, they showcase his desire to mix his personal interests with finding a practical way to do things that would endure for the rest of his life.

4.   Apprenticeship

Throughout Franklin's apprenticeship, he continued to intertwine his non-formal learning with informal learning. Specifically, he applied what he learned non-formally from books to his life where he then learned informally through continuous cycles of

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[332] Franklin, 5:11.

[333] Franklin, 5:11.

[334] Franklin, 5:11.

[335] Franklin, 5:12.

[336] Franklin, 5:12.

observation and adaption. Franklin made it known to his father that he did not like the chandler trade so at twelve years of age, Franklin signed indenture paperwork to serve as an apprentice under his older brother, James Franklin, as a printer. Josiah believed that Franklin's "bookish inclination" would be well suited for the trade and Franklin quickly proved to be valuable to his brother as he was well suited for both the physical and mental aspects of printing.[337] Franklin enjoyed the work but the true benefit of the apprenticeship was that he gained "access to better books" by befriending the apprentices of booksellers who enabled him to "borrow" their master's books.[338] Continuing his non-formal education and desire to learn from books, Franklin recalls, "often I sat up in my room reading the greatest part of the night, when the book was borrowed in the evening and to be returned early in the morning, lest it should be missed or wanted."[339]

Franklin's commitment to non-formal learning paid the largest dividends when he was able to leverage the knowledge he gained from reading to interact with people. In addition to dealing with the apprentices of booksellers on a daily basis, Franklin's inner circle of influential people began to grow as he was exposed to successful tradesmen who also valued reading. One of James's customer, Mr. Matthew Adams, took notice of Franklin's inquisitive mind and granted him access to his personal library to borrow books of his choosing. Throughout his life, Franklin's company was sought after by dignitaries who were impressed by his mind, which had been improved by his reading. Franklin states, "I suppose it was for that reason my conversation seem'd to be more valu'd."[340] A resounding factor in Franklin's success was his ability to attract patrons who would help him grow through networking and providing him access to more books.

Franklin's desire to experiment and try new things in areas that interested him continued when he gained access to the Adams' library. Franklin found a book on poetry, which he began to fancy and thus decided to try writing poems himself. James saw an

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[337] Franklin, *The Autobiography of Benjamin Franklin*, 14.

[338] Franklin, 14.

[339] Franklin, 14.

[340] Franklin, 53.

opportunity to capitalize on Franklin's curiosity and self-improvement attempts because poems based on noteworthy events were a popular form of entertainment at that time. To make money, James encouraged Franklin to publish his poems. Franklin produced two pieces; "The Lighthouse Tragedy" and a ballad about the notorious pirate known as Blackbeard. The first "sold wonderfully," which flattered Franklin's vanity, but he later recounted it as "wretched stuff."[341] The second piece did not sell as well and Josiah discouraged Franklin from writing further stating that "verse-makers were generally beggars."[342] Although Franklin seemingly failed and never became a great poet, his attempts at writing poetry demonstrates his willingness to learn by taking action and experimenting with things that interests him.

A trend that would continue throughout Franklin's life is befriending other individuals who shared his love for reading. As a form of informal learning, Franklin continually surrounded himself with people he could openly discuss, debate, and explore ideas with. During his apprenticeship, he began having intellectual debates with another boy named John Collins. Both enjoyed arguing and one day a question arose regarding the education of the female gender and their ability to learn. Collins argued that it was improper and that females did not possess the same abilities as males. For disputes sake, Franklin argued for the contrary side.[343] Although Collins' reasons were not sound, he bested Franklin because he was a more eloquent speaker with a better vocabulary. Franklin decided to continue the debate in writing. His father came across their correspondence and noted that Franklin's use of grammar and punctuation was correct, a result of all his editorial work as a printer, but his writing lacked persuasion. Josiah candidly pointed out several instances where Franklin fell short in elegance of expression and clarity, much to Franklin's chagrin.

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[341] Franklin, 14.

[342] Franklin, 15.

[343] Daniel Defoe, "The Education of Women," 1719, https://sourcebooks.fordham.edu/mod/1719defoe-women.asp. Franklin's ability and willingness to argue the perspective for women's learning abilities is likely influenced by his reading of Defoe who argued that women should be educated. Defoe argues, "the capacities of women are supposed to be greater and their senses quicker than those of the men."

Josiah had pointed out Franklin's deficiencies in writing on two separate occasions, his poetry and letters to John Collins, which fueled Franklin's desire to improve his writing skills through intentional practice. The opportunity for self-improvement arose when Franklin found a volume of *The Spectator*, of which he thought "the writing excellent, and wished, if possible, to imitate it."[344] Thus, he devised a plan consisting of different writing exercises to improve his writing, vocabulary, and organization. He dissected an essay sentence by sentence and wrote short hints to capture the meaning of each sentence. He would then try to recapitulate the essay from memory based on his hints. To increase his vocabulary, he turned the essays into verse, which forced him to consider different words to use that had the same meaning but differed in length, measure, sound, or rhyme. After he forgot the original prose, he would turn the verse back into prose. To teach himself how to arrange his thoughts and organize the essay, he would jumble his hints and put them back in the correct order before writing. Franklin constantly compared his works to the original, discovered his mistakes, and fixed them. Through his hard work, he found that sometimes he "had been lucky enough to improve the method or the language."[345] Franklin's creative and dedicated efforts to improve his writing marked the beginning of his lifelong acquisition of skills through intentional non-formal learning.

Although his writing exercises were effective, Franklin embraced multiple approaches to learning. Franklin's main priority was to learn the printing trade but he was "extremely ambitious…to become a tolerable English writer," so he dedicated his mornings before work and evenings after work for reading and conducting his writing exercises.[346] In his continuous quest to improve his language and writing skills, he came across a dispute using the Socratic method while studying rhetoric and logic, which prompted him to obtain Xenophon's *Memorable Things of Socrates*. In his autobiography, Franklin recalled, "I was charm'd with it, adopted it, dropt my abrupt contradiction and positive argumentation, and put on the humble inquirer and doubter."[347] In another

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[344] Franklin, *The Autobiography of Benjamin Franklin*, 16.

[345] Franklin, 16.

[346] Franklin, 16.

[347] Franklin, 17.

example of informal learning based on knowledge he gained from books, Franklin tested the Socratic method and quickly learned that it was more effective than the contentious and confrontational style he practiced with Collins. Drawing upon these informal learning situations and reflecting on the argumentative methods, Franklin concluded that being "disputatious" was a bad habit that can lead to "disgusts and, perhaps enmities where you may have occasion for friendship."[348] Showcasing his versatility, open-mindedness and growth mindset, Franklin continually strove for improvement through multiple means.

To create additional time for studying, Franklin made the decision to stop attending church on Sundays and chose to dedicate the day to non-formal learning through reading. Although Franklin's wide range of reading topics expanded his perspective, what benefitted him the most was his ability to learn informally by taking action on the knowledge he gained from books and applying it to his life. For example, Franklin came across a book recommending a vegetable diet, which he adopted, but his newfound dietary restrictions were inconvenient for his brother. Following the instructions on how to prepare vegetarian dishes, Franklin taught himself how to cook. Seeing that he could buy his own food and cook for himself for a fraction of the cost, Franklin proposed that his brother give him half the money James spent on food for him and allow him to feed himself. James agreed and Franklin discovered that he could survive on half of what his brother paid him by following the instructions in the book on how to prepare vegetarian dishes. Adopting a vegetarian diet provided two benefits for Franklin. Firstly, the money he saved provided additional funds to buy more books. Secondly, it provided him additional time alone in the printing-house to study while his brother left for meals during lunch. More importantly, Franklin found that he made the greatest progress during this time because his head was clear and not affected by eating and drinking excessively.[349] Acquiring knowledge through non-formal learning and applying the knowledge to create an advantage for himself is a habit that Franklin continued throughout his life.

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[348] Franklin, 15.

[349] Franklin, *The Autobiography of Benjamin Franklin*.

In addition to improving upon his strengths and trying new things, Franklin also dedicated time to improving in his weakest areas as well. With additional funds to procure books, Franklin sought to remedy his ignorance in math, which he failed to learn during his formal education. He went through Cocker's book of Arithmetic, which he states he "went through the whole by myself with great ease."[350] To further improve his math skills, Franklin read "Seller's and Shermy's books on navigation" from which he learned geometry.[351] From a young age, Franklin exhibited a growth mindset where he sought to improve upon his failures rather than believe he could not improve.

5.   Silence Dogood

In 1721, James Franklin decided to start his own newspaper, the *New England Courant*. James had friends who contributed to the paper by writing under pseudonyms to increase interest and demand for the paper. Franklin overheard many of their conversations discussing the articles for the paper and praising each other's prose. Franklin wanted to contribute as well but he feared his brother would not approve so he created the pseudonym Silence Dogood.[352] Using the pseudonym, he disguised his handwriting and left it at the printing-house for his brother to find.[353] His time spent improving his writing skills paid off as he had the "exquisite pleasure of finding it met with their approbation, and that, in their different guesses at the author, none were named but men of some character among us for learning and ingenuity."[354]

Aside from the content, what made Franklin's writing even more remarkable was his imagination and creativity, as a teenage boy, in portraying his fictional character, Silence Dogood, a middle-aged widowed woman. Franklin received a positive response

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[350] Franklin, 17.

[351] Franklin, 17.

[352] Benjamin Franklin, *The Autobiography of Benjamin Franklin* (University Park, PA: The Pennsylvania State University Press, 1998), 19. Biographer Walter Isaacson speculates that the name Silence Dogood was influenced by Cotton Mather's book *Essays to Do Good* and his sermon "Silentiarius, The Silent Sufferer." See Walter Isaacson, *Benjamin Franklin: An American Life* (New York, NY: Simon & Schuster, 2003), 26.

[353] Franklin, *The Autobiography of Benjamin Franklin*, 19.

[354] Franklin, 19–20.

from the public and he ended up writing fourteen essays under the pseudonym from April to October 1722. Using a pseudonym provided Franklin the freedom to write about his ideas on education and learning institutions. In his fourth essay, Dogood asks her reverend whether or not she should send her son to college in which he persuaded her that it was a good idea and that she should indeed send him. She later takes a walk to ponder about the "seminary of learning" and ends up falling asleep under a tree where she has a dream.[355] In the dream, she realizes that parents make the decision to send their children to college based on whether or not they can afford it and thus are "insensible to the Solidity of their Skulls."[356] As a result, their children "learn little more than how to carry themselves handsomely, and enter a Room genteely, (which might as well be acquir'd at a Dancing-School,) and from whence they return, after Abundance of Trouble and Charge, as great Blockheads as ever, only more proud and self-conceited."[357] After she awakens, she discusses her dream with the reverend and he agrees "that it was a lively Representation of Harvard College, Etcetera."[358] Franklin's essay on education provides insight on his thoughts regarding the usefulness of formal education. The fact that he believed having a formal education did not necessarily contribute to a person's intelligence or ability to serve mankind, likely reinforced his desire to continue his education through non-formal learning.

6.   A Plan for Conduct

On a voyage from London to Philadelphia in July 1726, Franklin indulged his curiosity by conducting experiments on anything that interested him. Isaacson notes that this voyage where Franklin conducted many experiments while at sea began a "lifelong scientific curiosity."[359] Isaacson demonstrates the depth of Franklin's curiosity by stating, "he experimented on the small crabs he found on some seaweed, calculated his distance

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[355] Benjamin Franklin, "Silence Dogood #4," May 14, 1722, https://www.ushistory.org/franklin/courant/silencedogood4.htm.

[356] Franklin.

[357] Franklin.

[358] Franklin.

[359] Isaacson, *Benjamin Franklin: An American Life*, 49.

from London based on the timing of a lunar eclipse, and studies the habits of dolphins and flying fish."[360]

In addition to Franklin's scientific experiments, he speculated that having a plan for life was similar to having a plan for a written piece. Likewise, a person is "in danger of incongruity" if they do not have a plan for life.[361] Franklin reflects that his life has been "confused" because he had not designed a plan for his life.[362] Thus, he decides to write a plan for conduct as he begins to enter a new chapter in life stating, "let me, therefore, make some resolutions, and form some schemes of action, that, henceforth, I may live in all respects like a rational creature."[363] His plan for future conduct consisted of four rules:

1. It is necessary for me to be extremely frugal for some time, till I have paid what I owe.
2. To endeavour to speak truth in every instance; to give nobody expectations that are not likely to be answered, but aim at sincerity in every word and action—the most amiable excellence in a rational being.
3. To apply myself industriously to whatever business I take in hand, and not divert my mind from my business by any foolish project of growing suddenly rich; for industry and patience are the surest means of plenty.
4. I resolve to speak ill of no man whatever, not even in a matter of truth; but rather by some means excuse the faults I hear charged upon others, and upon proper occasions speak all the good I know of everybody.[364]

In his autobiography, Franklin reflects, "it is the more remarkable, as being formed when I was so young, and yet being pretty faithfully adhered to quite thro' to old age."[365] Having conducted numerous exercises to improve specific skills with great success, Franklin's plan for conduct marks his first attempt to improve his character. Franklin's determination to improve demonstrates his personal purpose for learning and creating a more fulfilling and satisfying life.

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[360] Isaacson, 49.

[361] Benjamin Franklin, "Plan of Conduct," 1726, https://founders.archives.gov/documents/Franklin/01-01-02-0030.

[362] Franklin.

[363] Franklin.

[364] Franklin.

[365] Franklin, *The Autobiography of Benjamin Franklin*, 48.

B. CAREER

This section represents phase II of a person's lifespan—career. It begins after compulsory education is complete and a person's career starts. The career phase ends once a person retires and is no longer required to work. Franklin worked as a printer from 1726 to 1748, retiring at the age of forty-two.

1. Junto

Most of Franklin's non-formal learning consisted of reading books and writing; however, he continued to expand his social circle and began to include his intellectual friends in his learning endeavors during his career. The beginning of the eighteenth century was marked by a division of society between gentlemen and commoners; however, the social structure began to change with the emergence of "ambitious 'middling' men" who "prided themselves on their industriousness and frugality and their separation from the common idleness and dissipation of the gentry above them and the poor beneath them."[366] Although Franklin was not a part of the social elite or a part of any gentlemen's clubs, he was committed to personal and professional growth. To facilitate his growth, he formed his own "club of mutual improvement," called the Junto, comprised of his most "ingenious acquaintance [s]."[367] The club met on Friday evenings and each member was "required to produce one or more queries on any point of Morals, Politics, or Natural Philosophy, to be discuss'd by the company; and once in three months produce and read an essay of his own writing, on any subject he pleased."[368]

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[366] Gordon S. Wood, *The Americanization of Benjamin Franklin* (Penguin Books, 2005). Wood notes that a central tenet of being a gentlemen was "politeness" and states, "it meant not simply good manners and refinement but being genial and sociable, possessing the capacity to relate to other human beings easily and naturally." Furthermore, Isaacson notes It marked the beginning of a middle class comprised of tradesmen, artisans, and businessmen in which Isaacson asserts Franklin "epitomized" and remains a "symbol" of it more than two centuries later. See Walter Isaacson, *Benjamin Franklin: An American Life* (New York, NY: Simon & Schuster, 2003), 55.

[367] Franklin, *The Autobiography of Benjamin Franklin*, 56. Franklin lists the first members of the Junto in his autobiography, showcasing the diversity of gentlemen and their occupations. The members include: "Joseph Brientnal, a copyer of deeds for the scriveners;" "Thomas Godfrey, a self-taught mathematician;" "Nicholas Scull, a surveyor;" "William Parsons, a shoemaker;" "William Maugridge, a mechanic;" "William Coleman, a merchant's clerk" and Hugh Meredith, Stephen Potts, and George Webb (p. 56-57).

[368] Franklin, 56.

Debates in the Junto provided many informal learning situations for Franklin. Through his observations in the Junto, Franklin came to the conclusion that knowledge was obtained "rather by the use of the ears than of the tongue."[369] Reflecting on his own behavior, Franklin realized that "he had a habit of prattling, punning, and joking," which he believed "only made him acceptable to trifling company."[370] Seeking self-improvement, Franklin believed that the traits of temperance and silence were critical to rid himself of his bad habit. Franklin explains temperance was necessary because "it tends to procure that coolness and clearness of head, which is so necessary where constant vigilance was to be kept up, and guard maintained against the unremitting attraction of ancient habits, and the force of perpetual temptations."[371] Next, silence would help Franklin both listen to others and prevent himself from rambling on in conversation. While he practiced the traits of temperance and silence, he encouraged the Junto to use the Socratic method as well. Franklin states that the debates were "to be conducted in the sincere spirit of inquiry after truth, without fondness for dispute, or desire of victory."[372] To help achieve this objective, "all expressions of positiveness in opinions, or direct contradiction" were prohibited.[373] Franklin also created a set of twenty-four queries to further prompt discussion for the Junto shown in Appendix B.

One of Franklin's main purposes for learning was to provide civic service. Franklin believed in helping the public and that in doing so he could also help himself. Thus, the Junto became a place to discuss his ideas for public service. Each member of the Junto were avid readers; however, books were expensive, so each member contributed their personal collection of books to create a library for all Junto members. Knowing the importance of reading and that the general public did not have access to books, Franklin proposed that the members of the Junto offer access to their library for a fee, which would cover the costs for maintenance as well as allow them to purchase additional books. Thus,

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[369] Franklin, 78.

[370] Franklin, 78.

[371] Franklin, 78.

[372] Franklin, 56.

[373] Franklin, 56.

the Library Company of Philadelphia was incorporated in 1731 and became America's first subscription library. Always seeking to do good for the people, Franklin created the library's motto: *Communiter Bona profundere Derum est* meaning "to pour forth benefits from the common good is divine."[374] The Junto proved to be so instrumental to Franklin's learning that he continued to conduct meetings for thirty years.

Further demonstrating his ability to learn from informal situations, Franklin found that people did not want to support his ideas because they thought he was proposing them to benefit himself. Franklin states, "the objections and reluctances I met with in soliciting the subscriptions, made me soon feel the impropriety of presenting one's self as the proposer of any useful project, that might be suppos'd to raise one's reputation in the smallest degree above that of one's neighbors, when one has need of their assistance to accomplish that project."[375] After making this observation, Franklin adapted his behavior by putting himself "out of sight" by giving credit for his ideas to his friends.[376] By not advocating for ideas as his own, Franklin was able to establish the Union Fire Company, American Philosophical Society, and the Pennsylvania militia, which all originated from the Junto. Franklin notes, "in this way my affair went on smoothly, and I ever after practis'd it on such occasions; and, from my frequent successes, can heartily recommend it."[377] Isaacson declares that "the Junto was a product of Franklin's own persona" and that it "celebrated civic virtue, mutual benefits, the improvement of self and society, and the proposition that hardworking citizens could do well by doing good."[378]

2.   Moral Perfection

Through informal learning and constant reflection upon his actions, Franklin sought to build upon his plan for conduct. Although Franklin seldomly attended public worship,

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[374] "The Library Company of Philadelphia," The Library Company of Philadelphia, accessed January 5, 2021, https://librarycompany.org.

[375] Franklin, *The Autobiography of Benjamin Franklin*, 73.

[376] Franklin, 74.

[377] Franklin, 74.

[378] Isaacson, *Benjamin Franklin: An American Life*, 60.

he believed in the "utility" of religion and that "the most acceptable service of God was the doing good to man."[379] However, Franklin determined that the Presbyterian education provided was "very dry, uninteresting, and unedifying, since not a single moral principle was inculcated or enforc'd, their aim seeing to be rather to make us Presbyterians than good citizens."[380] Since he could not rely on the sect, Franklin decided he would create his own plan "to achieve moral perfection," a project he called "bold and arduous."[381] Improving upon his plan for conduct, Franklin stated, "I wish'd to live without committing any fault at any time; I would conquer all that either natural inclination, custom, or company might lead me into."[382] Through his years of broad reading, Franklin had encountered "various enumerations" of moral virtues and he selected thirteen virtues that he believed to be "necessary or desirable" at that time.[383] After choosing the most important virtues, Franklin included a short explanation for his specific meaning for each virtue:

1. TEMPERANCE. Eat not to dullness; drink not to elevation.
2. SILENCE. Speak not but what may benefit others or yourself; avoid trifling conversation.
3. ORDER. Let all your things have their places; let each part of your business have its time.
4. RESOLUTION. Resolve to perform what you ought; perform without fail what you resolve.
5. FRUGALITY. Make no expense but to do good to others or yourself; i.e., waste nothing.
6. INDUSTRY. Lose no time; be always employ'd in something useful; cut off all unnecessary actions.
7. SINCERITY. Use no hurtful deceit; think innocently and justly, and, if you speak, speak accordingly.

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[379] Franklin, *The Autobiography of Benjamin Franklin*, 75.

[380] Franklin, 76.

[381] Franklin, 76.

[382] Franklin, 76.

[383] Franklin, 78. Franklin originally selected the first twelve virtues listed. When discussing the contents of the list with a friend, he suggested Franklin add the virtue "humility" because he thought Franklin was too prideful. His friend listed examples where Franklin's pride could be "overbearing and rather insolent" so Franklin added "humility" to the list. Franklin stated, "my list of virtues contain'd at first but twelve; but a Quaker friend having kindly informed me that I was generally thought proud; that my pride show'd itself frequently in conversation; that I was not content with being in the right when discussing any point, but was overbearing, and rather insolent, of which he convinc'd me by mentioning several instances; I determined endeavouring to cure myself, if I could, of this vice or folly among the rest, and I added Hu- mility to my list) giving an extensive meaning to the word."

8. JUSTICE. Wrong none by doing injuries, or omitting the benefits that are your duty.
9. MODERATION. Avoid extreams; forbear resenting injuries so much as you think they deserve.
10. CLEANLINESS. Tolerate no uncleanliness in body, cloths, or habitation.
11. TRANQUILITY. Be not disturbed at trifles, or at accidents common or unavoidable.
12. CHASTITY. Rarely use venery but for health or offspring, never to dullness, weakness, or the injury of your own or another's peace or reputation.
13. HUMILITY. Imitate Jesus and Socrates.[384]

Shortly after starting his project, Franklin realized, "I had undertaken a task of more difficulty than I had imagined."[385] He found it difficult to adhere to all thirteen virtues stating, "while my care was employ'd in guarding against one fault, I was often surprised by another; habit took the advantage of inattention; inclination was sometimes too strong for reason."[386] He further concluded "the mere speculative conviction that it was our interest to be completely virtuous, was not sufficient to prevent our slipping; and that the contrary habits must be broken, and good ones acquired and established, before we can have any dependence on a steady, uniform, rectitude of conduct."[387]

In order to make each virtue a habit but also manageable, Franklin came to the conclusion that "it would be well not to distract my attention by attempting the whole at once, but to fix it on one of them at a time."[388] Thus, he made a plan to focus on one virtue at a time for one week each. This would enable him to complete a course of all virtues in "thirteen weeks, and four courses in a year."[389] Franklin knew "daily examination would be necessary," so he created a tracker with all thirteen virtues (shown in Figure 5).[390] He

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[384] Franklin, 77–78.

[385] Franklin, 76.

[386] Franklin, 76–77.

[387] Franklin, 77.

[388] Franklin, 78.

[389] Franklin, 80.

[390] Franklin, 79.

placed the thirteen virtues in rows and crossed it with the seven days of the week for the columns. Every night Franklin would reflect and make a mark under the virtue and day of the week for every fault he committed. As he focused on a specific virtue for a week, his goal was to keep that virtue clear of any marks on his tracker while "leaving the other virtues to their ordinary chance."[391] At the end of the week, Franklin considered "the habit of that virtue so much strengthen'd and its opposite weaken'd" and moved on to the next virtue.[392]

FORM OF THE PAGES
EAT NOT TO DULNESS;
DRINK NOT TO ELEVATION.

	S.	M.	T.	W.	T.	F.	S.
T.							
S.	*	*		*		*	
O.	**	*	*		*	*	*
R.			*			*	
F.		*			*		
I.			*				
S.							
J.							
M.							
C.							
T.							
C.							
H.							

Figure 5.   Benjamin Franklin's Moral Perfection Tracker[393]

[391] Franklin, 79.

[392] Franklin, 79.

[393] Franklin, 79.

Through his plan for moral perfection, Franklin found that the virtue of "order" was the most difficult for him.[394] Franklin believed that to be efficient and effective, "every part of [his] business should have its allotted time," so he developed a "scheme of employment for the twenty-four hours of a natural day" shown in Figure 4.[395] Most notably, Franklin began each day with intent, asking himself, "what good shall I do this day?" and ended each day with reflection asking himself, "what good have I done today?"[396] In doing so, Franklin reflected, "I was surpris'd to find myself so much fuller of faults than I had imagined; but I had the satisfaction of seeing them diminish."[397] This routine enabled him to set goals for the day and then reflect upon whether or not he actually achieved his goals. If he did not, he would determine how his behavior needed to change in order to achieve his goals.

As Franklin wrote his autobiography, he states that he "ow'd the constant felicity of his life" to the pursuit of these thirteen virtues.[398] As he writes to future readers, he encourages them not to resign from attempting to improve themselves by acknowledging his own happiness.[399] He further states the benefits of his moral perfection project and the benefits each virtue had on his life:

> To temperance he ascribes his long-continued health, and what is still left to him of a good constitution; to Industry and Frugality, the early easiness of his circumstances and acquisition of his fortune, with all that knowledge that enabled him to be a useful citizen, and obtained for him some degree of reputation among the learned; to Sincerity and Justice, the confidence of his country, and the honorable employs it conferred upon him; and to the joint influence of the whole mass of the virtues, even in the imperfect state he was able to acquire them, all that evenness of temper, and that cheerfulness in conversation, which makes his company still sought for, and agreeable even to his younger acquaintance.[400]

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[394] Franklin, *The Autobiography of Benjamin Franklin*.

[395] Franklin, 81.

[396] Franklin, 81.

[397] Franklin, 82.

[398] Franklin, 83.

[399] Franklin, *The Autobiography of Benjamin Franklin*.

[400] Franklin, 83–84.

Furthermore, Franklin understood that learning and growth should be viewed as a journey, rather than a destination. He states, "I never arrived at the perfection I had been so ambitious of obtaining, but fell far short of it, yet I was, by the endeavour, a better and a happier man than I otherwise should have been if I had not attempted it."[401] Franklin's moral perfection project exemplified his commitment to lifelong learning by continually striving to become the person he envisioned (Figure 6).
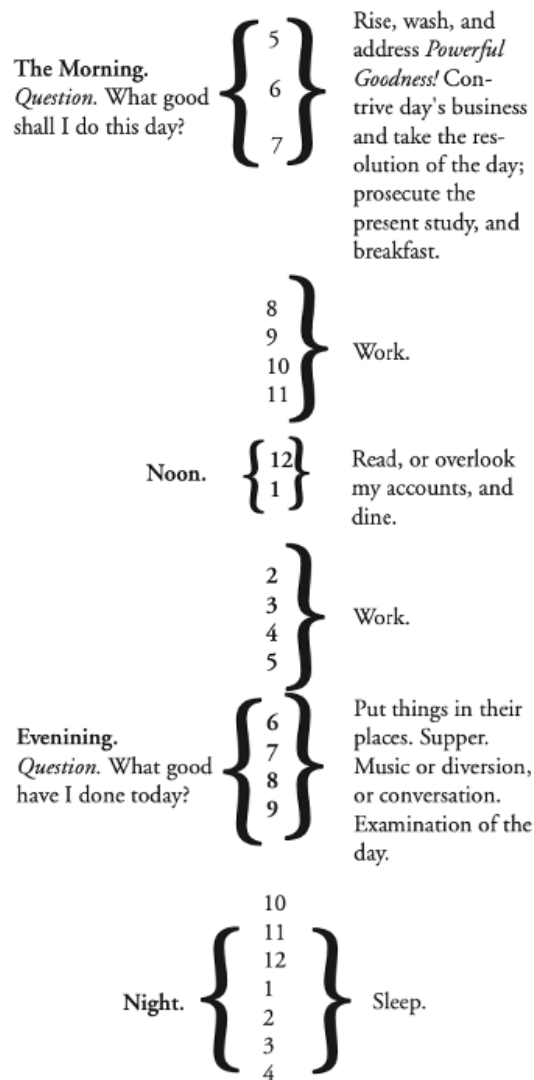

Figure 6.   Benjamin Franklin's Daily Schedule[402]

[401] Franklin, 83.

[402] Franklin, 81–82.

3. Poor Richard's Almanack

Showcasing Franklin's versatility and ability to build upon his writing skills, he began publishing *Poor Richard's Almanack* in 1732 to further distinguish his printing-house and gain an additional source of income. Through his years of experience writing under different pseudonyms, Franklin created the fictional characters Richard and Bridget Saunders. Furthering his professional and democratic purposes for learning, Isaacson notes how Franklin "combined the two goals of his doing-well-by-doing-good philosophy: the making of money and the promotion of virtue."[403] Given its popularity and high demand, Franklin recounted, "I consider'd it as a proper vehicle for conveying instruction among the common people, who bought scarcely any other books."[404] With this purpose in mind, Franklin filled the almanack with proverbs that "inculcated industry and frugality as the means of procuring wealth and thereby securing virtue."[405] Since Franklin's proverbs were not completely original and "contained the wisdom of many ages and nations," Isaacson points out "Franklin's talent was inventing a few new maxims and polishing up a lot of older ones to make them pithier."[406] Franklin's attitude toward education, learning, and continual improvement are spread throughout the Almanack's 25 years of publishing:

- "Being ignorant is not so much a shame as being unwilling to learn."[407]

- "Tim was so learned that he could name a horse in nine languages. So ignorant that he bought a cow to ride on."[408]

- "Wise men learn by others' harms; Fools by their own."[409]

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[403] Isaacson, *Benjamin Franklin: An American Life*, 94.

[404] Franklin, *The Autobiography of Benjamin Franklin*, 89.

[405] Franklin, 89.

[406] Franklin, 89; Isaacson, *Benjamin Franklin: An American Life*, 98.

[407] Benjamin Franklin, *Poor Richard's Almanack* (New York, NY: Barnes & Noble Publishing, Inc, 2009).

[408] Franklin.

[409] Franklin.

- "If though hast wit & learning, add it to Wisdom and Modesty."[410]

- "Learn of the skilful: He that teaches himself, hath a fool for his master."[411]

- "Learning, whether Speculative or Practical, is, in Popular or Mixt Governments, the Natural Source of Wealth and Honour."[412]

- "Who is wise? He that learns from everyone. Who is powerful? He that governs his passions. Who is rich? He that is content. Who is that? Nobody."[413]

- "Diligence overcomes difficulties, Sloth makes them."[414]

- "Genius without Education is like Silver in the Mine."[415]

- "Want of care does us more damage than want of knowledge."[416]

- "Fools make feasts and wise men eat them."[417]

- "After crosses and losses Men grow humbler and wiser."[418]

- "Think of three things: Whence you came, Where you are going, And to whom you must account."[419]

- "How is strong? He that can conquer his bad habits."[420]

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[410] Franklin.

[411] Franklin.

[412] Franklin.

[413] Franklin.

[414] Franklin.

[415] Franklin.

[416] Franklin.

[417] Franklin.

[418] Franklin.

[419] Franklin.

[420] Franklin.

- "Success has ruined many a man."[421]

- "There are lazy minds as well as lazy bodies."[422]

- "Life with fools consists in drinking; with the wise man, living's thinking."[423]

- "He that won't be counselled, can't be helped."[424]

- "Reading makes a full Man, Meditation a profound Man, discourse a clear Man."[425]

- "Good sense is a Thing all need, few have, and none think they lack."[426]

4.   Retirement

Although Franklin was able to retire at an early age, he does not stop learning because he does not have a profession to apply it to. In fact, he takes advantage of the additional time he is afforded in retirement to continue learning. In 1748, at the age of forty-two, Franklin made the decision to retire. His constant efforts toward personal and professional self-improvement enabled him to grow a successful printing press, publishing house, newspaper, and an almanac series.[427] Although Franklin practiced the virtue of frugality and often preached its importance in many of his writings, the accumulation of riches was not his ultimate goal in life. His desire to continuously learn and provide civic service is demonstrated in a letter he writes to Cadwallader Colden in which Franklin reflects on his retirement. He explains how he enjoys his "leisure to read, study, make

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[421] Franklin.

[422] Franklin.

[423] Franklin.

[424] Franklin.

[425] Franklin.

[426] Franklin.

[427] Isaacson, *Benjamin Franklin: An American Life*. Franklin left his printing business to David Hall. The agreement for the business would provide Franklin with half of the business's profit for eighteen years. Isaacson notes that this amounted to £650 annually. To put into perspective, Isaacson notes that a common clerk made approximately £25 a year.

experiments, and converse at large with such ingenious and worthy men as are pleased to honor me with their friendship or acquaintance, on such points as may produce something for the common benefit of mankind, uninterrupted by the little cares and fatigues of business."[428] Isaacson notes, "Franklin was not aspiring, by his retirement, to become merely an idle gentleman of leisure. He left his print shop because he was, in fact, eager to focus his undiminished ambition on other pursuits that beckoned: first science, then politics, then diplomacy and statecraft."[429] Despite being retired and having a successful career, Franklin's desire and commitment to lifelong learning continued.

C.   POST CAREER

This section represents phase III of a person's lifespan—post-career. It begins after retirement and continues through life. Although Franklin achieved remarkable success as a printer and was able to retire at the age of forty-two, he continued to learn. His learning led to him becoming a scientist, inventory, politician and diplomat.

1.   Scientist and Inventor

After retiring, Franklin continued his non-formal learning through science and experimenting in which several of his inventions are still in use today. Drawing upon the influence from *Essay to Do Good* and exhibiting his economic and democratic purposes for learning, Franklin chose not to patent his inventions because he knew they would benefit society. Rather than using his knowledge and inventions to gain wealth, biographer Henry Brands states, "the kind of knowledge he prized was that which made life easier, more productive, or happier" for himself and others.[430]

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[428] Benjamin Franklin, *The Works of Benjamin Franklin, Vol. II Letters and Misc. Writings 1735-1753*, ed. John Bigelow, vol. 3 (Indianapolis, Indiana: The Online Library of Liberty, 2013), 166, https://oll.libertyfund.org/title/bigelow-the-works-of-benjamin-franklin-vol-ii-letters-and-misc-writings-1735-1753.

[429] Isaacson, *Benjamin Franklin: An American Life*, 128.

[430] Henry W. Brands, *The First American: The Life and Times of Benjamin Franklin* (New York, NY: Anchor Books, 2002), 167.

a.   Pennsylvania Fireplace

One of Franklin's first inventions was the Pennsylvania fireplace, a cast-iron fireplace that maximized heat while minimizing smoke.[431] Using his knowledge of convective heat transfer, Franklin created a design that transferred heat more efficiently with less wood while also being safer by reducing smoke and preventing fires. Leveraging his social circle, Franklin recruited Robert Grace from the Junto to manufacture his fireplace design. To promote the fireplace, Franklin used his writing skills to create a pamphlet that explained how it was constructed and the benefits of the stove.[432] The governor of Pennsylvania was impressed by the stove and offered Franklin a lucrative patent for the stove; however, Franklin declined it.[433] Franklin reflects, "the use of these fireplaces in very many houses, both of this and the neighbouring colonies, has been, and is, a great saving of wood to the inhabitants."[434] Furthermore, Franklin states that, "as we enjoy great advantages from the inventions of others, we should be glad of an opportunity to serve others by any invention of ours; and this we should do freely and generously."[435] Franklin's mentality that learning and the inventions that arise from it should be used to provide economic and democratic service is evident.

b.   Lightning Rod

Although Franklin's scientific experiments were conducted mostly for personal enjoyment, he also believed that science should be useful. Therefore, he sought to find an economic and democratic benefit for all of his inventions, which was exemplified by his work with electricity. Franklin is most famously known for his kite experiment, in which he proved the connection between lightning and electricity. However, his interest in

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[431] The Pennsylvania Fireplace is also known as the "Franklin stove."

[432] Benjamin Franklin, "An Account of the New-Invented Pennsylvania Fireplaces; Wherein Their Construction and Manner of Operation Is Particularly Explained; and All Objects That Have Been Raised Against the Use of Them Answered and Obviated," 1744, http://digitalcollections.powerlibrary.org/cdm/ref/collection/SLP2005001/id/1058.

[433] Franklin, *The Autobiography of Benjamin Franklin*, 108.

[434] Franklin, 109.

[435] Franklin, 108.

electricity started from his fascination with simple electricity tricks, which eventually led to the invention of lightning rods. In 1747, Peter Collinson, a fellow of the Royal Society in London, sent the Library Company a glass tube with instructions for conducting electricity experiments, which sparked Franklin's curiosity and fascination with electricity. In a thank you letter to Collinson, Franklin stated, "I was never before engaged in any study that so totally engrossed my attention and my time."[436] Franklin began collecting electricity by transferring it to a Leyden jar in which he discovered that electricity is not generated from friction but rather is transferred from one object or person to another.[437] Using this knowledge, Franklin created the first electrical battery in 1749 by storing electrical charges in Leyden jars to be used later. To explain his invention, Franklin coined the terms "battery," "charge," "discharge," "positive" and "negative" (in terms of electrical charge), "condense," and "conductor," which are still used today.[438] Mixing his personal interests, playful personality, and desire to find a practical use for his inventions, Franklin used the electrical battery to host guests at an event during which "a Turky is to be killed for our Dinners by the Electrical Shock; and roasted by the electrical Jack, before a Fire kindled by the Electrified Bottle."[439] Franklin theorized that "the Birds kill'd in this Manner eat uncommonly tender."[440] Pointing out Franklin's desire to mix personal and civic purposes for learning, Isaacson states, "he would begin a scientific inquiry driven by pure intellectual curiosity and then seek a practical application for it."[441] Although Franklin enjoyed playing with electricity, he states he was "chargrin'd a little that we have hitherto been able to discover nothing in this way of use to mankind."[442]

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[436] Benjamin Franklin, "Benjamin Franklin to Peter Collinson," March 28, 1747, https://franklinpapers.org/framedNames.jsp.

[437] Franklin's discovery became known as the conservation of charge and the single fluid theory of electricity.

[438] Benjamin Franklin, "Benjamin Franklin to Peter Collinson," May 25, 1747, https://franklinpapers.org/framedNames.jsp.

[439] Franklin, "Benjamin Franklin to Peter Collinson," March 28, 1747.

[440] Benjamin Franklin, "Benjamin Franklin to Peter Collinson," February 4, 1750, https://franklinpapers.org/framedNames.jsp.

[441] Isaacson, *Benjamin Franklin: An American Life*, 130.

[442] Benjamin Franklin, "Benjamin Franklin to Peter Collinson," April 29, 1749, https://franklinpapers.org/framedNames.jsp.

Nevertheless, Franklin continued conducting experiments in pursuit of an economic or democratic use for electricity. Through his experiments, Franklin found that electricity was similar to lightning in many ways.[443] Building upon his theory that electricity is passed from a positively charged entity to a negatively charged entity, Franklin surmised that water vapors from thunderclouds become charged and that lightning is simply the discharge of electricity.[444] From this speculation, he concluded that it is dangerous to take shelter under a tree during a thunderstorm because it will draw the discharge from the electrified cloud as it passes over it.[445] In addition to trees drawing the discharge of electricity from clouds, Franklin also observed that bells placed atop churches to be rung during storms were often struck by lightning. He states, "the lightning seems to strike steeples of choice and at the very time the bells are ringing…one would think it was now time to try some other trick."[446] Since he discovered that electricity is attracted to pointed rather than blunt tips, he was determined to see if the same was true for lightning.[447] To mark his enthusiasm, he exclaimed "let the experiment be made."[448]

In 1750, Franklin wrote a letter to Collinson describing an experiment for a lightning rod, which would serve a practical use of protecting buildings. The experiment involved placing an iron rod with a pointed end on top of a tall building and connecting it to the ground through a wire. Franklin believed that the pointed rod would draw the electrical charge, which would then be guided to the ground through the wire instead of

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[443] Benjamin Franklin, "Benjamin Franklin to John Lining," March 18, 1755, https://franklinpapers.org/framedNames.jsp. Franklin sent an extract from the minutes he kept on all of his experiments to Lining. He noted twelve similarities between electricity and lightning: "1. Giving light. 2. Colour of the light. 3. Crooked direction. 4. Swift motion. 5. Being conducted by metals. 6. Crack or noise in exploding. 7. Subsisting in water or ice. 8. Rending bodies it passes through. 9. Destroying animals. 10. Melting metals. 11. Firing inflammable substances. 12. Sulphureous smell."

[444] Benjamin Franklin, "Benjamin Franklin to John Mitchell," April 29, 1749, https://franklinpapers.org/framedNames.jsp.

[445] Franklin.

[446] Benjamin Franklin, "Benjamin Franklin to John Winthrop," July 2, 1768, https://franklinpapers.org/framedNames.jsp.

[447] Franklin, "Benjamin Franklin to Peter Collinson," May 25, 1747.

[448] Franklin, "Benjamin Franklin to John Lining," March 18, 1755.Franklin. Franklin was not the first person to note a connection between electricity and lightning, but he is the first person to design and conduct an experiment to gather proof of his observation.

through the building.[449] Franklin planned to conduct this experiment atop Philadelphia's Christ Church once it was done being built; however, recalling his experiments with kites from his adolescence, he decided that using a kite would work just as well.[450] In 1752, Franklin attached a small lightning rod to a silk kite that had hemp twine running from the kite to the ground to act as a conductor. He tied a key to the twine to absorb the electric charge and attached a silk ribbon to his knuckles to act as an insulator. Contrary to popular belief, Franklin's kite was not struck by lightning. Still, he was able to draw a charge, which created an electrical spark and thus proved his hypothesis that lightning was discharged electricity. Always focused on how his learning could serve society, Franklin stated, "houses, ships and even towns and churches may be effectually secured from the stroke of lightning."[451]

Franklin's experiments highlight how his purpose for learning began with personal enjoyment and transitioned to finding an economic or democratic use. Biographer Carl Van Doren states that Franklin "found electricity a curiosity and left it a science."[452] His determination to find a practical use also demonstrates his lack of mathematical training, since he was not concerned with explaining why phenomena occur. Isaacson states, "he had neither the academic training nor the grounding in math to be a great theorist, and his

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[449] The experiments were conducted in France first; however, Franklin did not know they had already been conducted when he did his kite experiment.

[450] Isaacson, *Benjamin Franklin: An American Life*.

[451] Benjamin Franklin, "Benjamin Franklin to Peter Collinson," March 2, 1750, https://franklinpapers.org/framedNames.jsp.

[452] Carl Van Doren, *Benjamin Franklin* (New York, NY: The Viking Press, 1938), 171; Franklin's discovery and contribution to science was so noteworthy that he received a slew of honorary degrees. He received honorary degrees from Harvard and Yale in 1753. William and Mary College followed suit awarding him a honorary Master of Arts degree in Aril 1756. Franklin was also awarded an honorary Doctor of Law degree from the University of St. Andrews, Scotland in 1759. In addition to his honorary degrees, London's Royal Society awarded Franklin the Sir Godfrey Copley gold medal in 1753. See The Royal Society, "The Copley Medal," accessed January 21, 2021, https://royalsociety.org/grants-schemes-awards/awards/copley-medal/. The Copley medal is a prestigious scientific award dating back 170 years prior to the Nobel Prize that is awarded for the "most important scientific discovery or for the greatest contribution made by experiment." Also see "Earl of Macclesfield: Speech Awarding the Copley Medal," November 30, 1753, https://founders.archives.gov/documents/Franklin/01-05-02-0037. Although Franklin was not the first person to recognize similarities between electricity and lighting, he was the first one to prove it. During the speech for the Copley medal, Franklin was lauded for creating a method that "has been so successfully put in execution in many different places, that it remains no longer a matter of suspicion and doubt; but is clear and plain to a demonstration, that electricity alone is the cause of the tremendous appearance, whose effects prove frequently so fatal in many parts of this terraqueous globe."

pursuit of what he called his 'scientific amusements' caused some to dismiss him as a mere tinkerer."[453] This mindset is exemplified in a letter Franklin wrote to Collinson in which he states:

> Nor is it much importance to us to know the manner in which nature executes her laws; it is enough if we know the laws themselves. It is of real use to know that China left in the air unsupported will fall and break; but *how* it comes to fall and why it breaks are matters of speculation. It is a pleasure indeed to know them, but we can preserve our China without it.[454]

Isaacson notes, "he was a practical experimenter more than a systematic theorist" whose "scientific work was distinguished less for its abstract theoretical sophistication than for its focus on finding out facts and putting them to use."

2.   Academy

Franklin's belief that the purpose of learning should be to promote service through economic and democratic means while also being beneficial to the individual is embodied by his formation of the Academy, which is now the University of Pennsylvania. Brands asserts that "Franklin's efforts to educate himself made him an enthusiast of formal education," and in 1749, Franklin wrote a pamphlet titled *Proposals Related to the Education of Youth in Pennsylvania* advocating for an Academy.[455] Although Franklin was able to overcome his gaps in formal education through non-formal learning and reading books, Brands states it "required a sense of discipline, a devotion to learning, and a knack for absorbing information that were not given equally to all."[456] Realizing that not everyone would be as committed to learning as he had been and also understanding the necessity for learning to create a greater community, Franklin sought to create an academy for Philadelphia. As with all of Franklin's proposals, he laid out in great detail how the youth were to be educated. Believing that all knowledge should have a practical use,

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[453] Isaacson, *Benjamin Franklin: An American Life*, 129.

[454] Franklin, *The Works of Benjamin Franklin, Vol. II Letters and Misc. Writings 1735-1753*, 3:214.

[455] Brands, *The First American: The Life and Times of Benjamin Franklin*; Benjamin Franklin, "Proposals Relating to the Education of Youth in Pennsylvania," *The Journal of General Education* 28, no. 3 (1976): 256–61.

[456] Brands, *The First American: The Life and Times of Benjamin Franklin*, 194.

Franklin centered the learning on professional development for economic and democratic benefit stating, "it is therefore proposed, that they learn those things that are likely to be most useful and most ornamental; regard being had to the several professions for which they are intended." He explains that by having an Academy in Philadelphia, children "by this means receive their education where they receive their birth, and be accustomed, from their infancy, to inhabit and affect their native soil."[457] The education they received would serve personal, economic, and democratic learning purposes being "highly useful to the possessor, and most agreeable to all."[458] Franklin's desire to create an academy for children demonstrates his belief that learning and education play an integral role in shaping their learning attitude and ability later in life.

Drawing from his personal learning experiences, Franklin's proposal for the curriculum showcased a multitude of purposes and covered a wide range of topics including writing, grammar, rhetoric, literature, arithmetic, geometry, astronomy, drawing, history, geography, ancient customs, morality, oratory, religion, civil orders and constitutions, gardening, agriculture, commerce, mechanics, and art. Writing played an integral role in Franklin's success and he emphasized it in his proposal stating, "all should be taught to write a fair hand, and swift, as that is useful to all."[459] Reading had the most influential impact on Franklin's life and he recommends that it should be taught at the Academy.[460] The importance of reading is necessary since the majority of the curriculum was to be taught through history, which derived from his joy of reading *Parallel Lives of the Noble Greeks and Romans*. Appealing to the need for a personal interest in learning, Franklin recommends learning from Greek and Roman historians arguing that "if history be made a constant part of their reading…may not almost all kinds of useful knowledge be that way introduced to advantage, and with pleasure to the student?"[461] Pointing to the effect Franklin's early reading had on his life, he concludes, "the general natural tendency

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[457] Franklin, "Proposals Relating to the Education of Youth in Pennsylvania."

[458] Franklin, 261.

[459] Franklin, 258.

[460] Franklin, "Proposals Relating to the Education of Youth in Pennsylvania."

[461] Franklin, 258.

of reading good history must be, to fix in the minds of youth deep impressions of the beauty and usefulness of virtue of all kinds, public spirit, and fortitude."[462]

Further demonstrating his desire to ensure that the children received useful and practical knowledge, Franklin makes recommendations for their diet and physical activity. Drawing from the virtues from his moral perfection project, he states that they should "diet together plainly, temperately, and frugally."[463] His lifelong love for swimming manifests itself as he outlines the necessity for the children to keep their bodies healthy by stating that they should "be frequently exercised in running, leaping, wrestling, and swimming."[464] Combining knowledge, practical application, and physical activity, Franklin states, "the whole should be constantly inculcated and cultivated that benignity of mind, which shows itself in searching for and seizing every opportunity to serve and to oblige."[465] Franklin's summarizes his overall vision for the Academy by stating:

> "the idea of what is true merit should also be often presented to youth, explained and impressed on their minds, as consisting in an inclination, joined with an ability, to serve mankind, one's country, friends, and family; which ability is, with the blessing of God, to be acquired or greatly increased by true learning; and should, indeed, be the great aim and end of all learning."[466]

Franklin's vision suggests that he believes education and learning have a profound impact on the youth. Although he states the overall aim of true learning is to serve mankind, the curriculum he outlines for the Academy demonstrates how purposes for learning progress from individual to professional and to economic before arriving at the ultimate goal of a democratic purpose.

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[462] Franklin, 259.

[463] Franklin, 257.

[464] Franklin, 257.

[465] Franklin, 261.

[466] Franklin, 261.

3. Final Years

Despite Franklin's success, his constant devotion to self-improvement and learning endured throughout his life. Franklin's love for reading and commitment to lifelong learning is further exemplified by the fact that he had an additional wing built into his house for his personal library at the age of eighty. In a letter to his sister, he states, "I hardly know how to justify building a Library at an Age that will so soon oblige me to quit it; but we are apt to forget that we are grown old, and Building is an Amusement."[467] Franklin valued learning so deeply that in addition to building his own personal library, he added a codicil to his will that set aside £1000 for the cities of Boston and Philadelphia each.[468] The money would be used to provide loans for aspiring tradesmen and fund public projects over the next 200 years,[469] which ultimately led to the establishment of The Benjamin Franklin Institute of Technology,[470] and The Franklin Institute.[471] Franklin stated, "I wish to be useful even after my death, if possible, in forming and advancing other young men that may be serviceable to their country."[472]

D. CONCLUSION

This case study on Benjamin Franklin provides an empirical example of a person who was committed to lifelong learning and who encompassed multiple learning contexts and purposes. As a result of his learning and application of knowledge, Franklin was able

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[467] Benjamin Franklin, "Benjamin Franklin to Jane Mecom," September 21, 1786, https://franklinpapers.org/framedNames.jsp.

[468] The £2000 Franklin donated was the total of his salary from the three years he served as President of the Council of Pennsylvania from 1875-1878. His donation further demonstrates his belief to serve the public, which exhibits his democratic purpose for learning.

[469] Benjamin Franklin, "Excerpts from Benjamin Franklin's Will and Codicil," U.S. History, 1788, http://www.cs.appstate.edu/~sjg/class/1010/wc/finance/benfcodicil.html.

[470] "Benjamin Franklin Institute of Technology," Benjamin Franklin Institute of Technology, accessed January 12, 2021, https://www.bfit.edu. The Benjamin Franklin Institute of Technology (BFIT) is a private, non-profit college in Boston, Massachusetts. In accordance with Franklin's intent and spirit, the BFIT offers programs that focus on building skills necessary for areas of employment.

[471] "The Franklin Institute," The Franklin Institute, accessed January 12, 2021, https://www.fi.edu. The Franklin Institute is a science museum in Philadelphia, Pennsylvania. The mission for The Franklin Institute is to "inspire a passion for learning about science and technology," which reflects Franklin's "spirit of inquiry and discovery."

[472] Franklin, "Excerpts from Benjamin Franklin's Will and Codicil."

to continuously adapt to his environment, which led to success in many professions. As a testament to his success from lifelong learning, Franklin is the only Founding Father to sign all four documents that led to America's independence from Great Britain: The Declaration of Independence (1776), Treaty of Alliance with France (1778), The Treaty of Paris (1783), and The Constitution of the United States (1787). The next chapter will provide an analysis of MCDP 7 and the Benjamin Franklin case study using the lifelong learning conceptual framework.

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V.   ANALYSIS

The previous chapter provided a case study on Benjamin Franklin to act as an empirical example of a lifelong learner. In this chapter, the lifelong learning conceptual framework is used to analyze MCDP 7 and the Franklin case study to determine how they do and do not overlap within the three themes: time-frame, context, and purpose. The time frames for lifelong learning describe when, during a person's life, learning should be begin and end. The time frames are cradle-to-grave, career, and adulthood. Learning contexts involve what type of setting learning should be conducted in and include formal, informal and non-formal. Lifelong learning purposes encompass personal, professional, economic, and democratic. The analysis shows that MCDP 7 focuses on the career time-frame, formal and informal learning contexts, and the professional purpose for learning. By contrast, the Franklin case study shows that his learning encompassed the cradle-to-grave time-frame, all three contexts and multiple purposes for learning. The results of the analysis are shown in Table 3.

Table 3.   Lifelong Learning Conceptual Framework Analysis

Lifelong Learning Theme	MCDP 7	Benjamin Franklin Case Study
Time-Frame	Career	Cradle-to-Grave
Context	Formal Informal	Formal Informal Non-Formal
Purpose	Professional	Personal Professional Economic Democratic

A.   MCDP 7

The purpose of MCDP 7 is to "describe the Marine Corps' learning philosophy and explain why learning is critically important to the profession of arms."[473] The goal of this philosophy is to "create a culture of continuous learning and professional competence that yields adaptive leaders capable of successfully conducting maneuver warfare in complex, uncertain, and chaotic environments."[474] An analysis of MCDP 7 shows that it concentrates primarily on single elements across the three themes of the lifelong learning conceptual framework: the career time-frame, formal and informal learning contexts, and the professional purpose for learning.

1.   Time Frame

In regard to the time-frame for learning, MCDP 7 focuses exclusively on the career time frame. All Marines begin their service in the Marine Corps post-compulsory education; therefore, the Marine Corps cannot influence Marine's learning before joining. Since the cradle-to-grave time frame begins once a person is born, it does not apply to the Marine Corps. Both the career and adulthood time frames begin after compulsory education; however, the difference between them is when learning ends. In the career time-frame, the commitment to learning stops once a person retires or is no longer working. In contrast, in the adulthood time frame, the commitment to learning continues throughout their entire adult life. MCDP 7 emphasizes "career-long" learning. It states, "the most important factor in this philosophy is the importance of continuous learning throughout our careers for warfighting."[475] Furthermore, MCDP 7 states that "developing the mind as a weapon is a career-long process."[476]

Each section within MCDP 7 reinforces the importance of learning throughout a Marine's career. In the "Nature of Learning" section, MCDP 7 lists five learning principles. The second principle is to "be ready and willing to learn," which says that "Marines have

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[473] Berger, "Foreword," 1.

[474] U.S. Marine Corps, *Learning*, 1–3.

[475] Berger, "Foreword," 1.

[476] U.S. Marine Corps, *Learning*, 1–19.

a professional responsibility to learn throughout their careers and should always seek opportunities to learn."[477] In the "Culture of Learning" section, MCDP 7 states that "the Marine Corps culture supports continuous, career-long learning at all levels."[478] In the "Learning Environment" section, MCDP 7 states, "all Marines must engage in disciplined, career-long continuous learning."[479] In the "Learning Leader" section, MCDP 7 states, "leaders set the example by pursuing continuous professional development and career-long learning."[480] Overall, MCDP 7 states that "the Marine Corps as an institution demonstrates a focus and commitment to encouraging career-long learning by continuously refining learning methods and providing resources and opportunities for professional development."[481]

While MCDP 7 does not specifically mention post-career learning, it does emphasize that learning is a process. It states, "Marines are continuous learners—they pursue mastery in the profession of arms, recognizing that the achievement of mastery is a journey, not a destination."[482] Furthermore, MCDP 7 states, "the Marine Corps organizational culture recognizes that the process of learning is never complete."[483] Although MCDP 7 recognizes that learning is a never ending process, it focuses solely on learning throughout a Marine's career.

2.   Context

MCDP 7 distinguishes two types of contexts, formal and informal; however, its conception of the informal context includes elements of the non-formal context. MCDP 7 describes learning contexts by stating, "learning occurs in formal settings (e.g., a schoolhouse or training exercise) and informal settings, such as social, experiential, self-directed, and other ways outside of the classroom."[484] It is through these contexts that

[477] U.S. Marine Corps, 1–10.

[478] U.S. Marine Corps, 2–14.

[479] U.S. Marine Corps, 3–20.

[480] U.S. Marine Corps, 4–11.

[481] U.S. Marine Corps, 2–10.

[482] U.S. Marine Corps, 1–19.

[483] U.S. Marine Corps, 2–13.

[484] U.S. Marine Corps, 1–4.

"Marines improve competencies through formal and informal learning opportunities that develop the required knowledge, skills, and attitudes."[485] The EC defines formal learning as "learning typically provided by an education or training institution, structured (in terms of learning objectives, learning time or learning support) and leading to certification."[486] The majority of a Marine's formal learning occurs during initial training and continues throughout a Marine's career as they attend PME.

Although learning in formal contexts is important, MCDP 7 acknowledges that learning "often occurs outside of formal settings."[487] To capture learning that occurs outside of formal settings, MCDP 7 includes an informal context as well. The EC defines informal learning as "learning resulting from daily life activities related to work, family or leisure. It is not structured (in terms of learning objectives, learning time or learning support) and typically does not lead to certification."[488] In addition to instructors from formal schools, MCDP 7 states that Marines also "learn from leaders, mentors, peers, subordinates, professional reading, field exercises, in garrison, and aboard ship."[489] Furthermore, "Marines learn about warfighting through on-the-job activities, discussions with other Marines, interactions with the members of other Services and allied forces, and all their experiences."[490] Since Marines cannot stay in formal schools perpetually, Marines should supplement their learning through their daily activities.

MCDP 7 does not, by name, include a non-formal context, but its definition of informal learning includes elements of non-formal learning. The EC defines non-formal learning as "learning that is not provided by an education or training institution and typically does not lead to certification. It is, however, structured (in terms of learning objectives, learning time or learning support)."[491] The key distinction between informal

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[485] U.S. Marine Corps, 1–5.

[486] European Commission, "Making a European Area of Lifelong Learning a Reality," 32.

[487] U.S. Marine Corps, *Learning*, 3–8.

[488] European Commission, "Making a European Area of Lifelong Learning a Reality," 32.

[489] U.S. Marine Corps, *Learning*, 3–8.

[490] U.S. Marine Corps, 3–8.

[491] European Commission, "Making a European Area of Lifelong Learning a Reality," 32.

and non-formal learning is that the latter is structured and intentional. MCDP 7 describes informal as "self-directed" and states that "Marines must learn about a broad range of topics and skills through professional reading."[492] Furthermore, MCDP 7 states that the development of an intellectual edge "must come from self-disciplined study and deliberate practice as Marines to build competencies in the profession of arms."[493] Although self-directed study, deliberate practice, and professional reading are considered informal learning in MCDP 7, they fit the literature's definition of non-formal learning.

3.   Purpose

MCDP 7 predominantly advocates for a professional purpose for learning since Marines have a responsibility to pursue the study and mastery of a profession of arms. General Berger states, "our professional responsibility—as Marines—is to engage in continuous learning so that we may best support our fellow Marines, our Corps, and our Nation."[494] The learning philosophy in MCDP 7 is centered on warfighting:

> The Marine Corps, as the Nation's force-in-readiness, must have the versatility and flexibility to effectively fight—and succeed—in any situation and at any intensity across the full spectrum of conflict, whenever and wherever the Nation calls. To meet these demands, it is critical that Marines recognize that learning has a direct impact on warfighting.[495]

MCDP 7 states that "Marines embrace learning to effectively instill fundamental warfighting skills, recognize when change is required, and then adapt effectively to the factors driving change."[496] In order to improve, MCDP 7 states, "Marines understand why they are learning and how it will improve their professional competencies as

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[492] U.S. Marine Corps, *Learning*, 1–20.

[493] U.S. Marine Corps, 1–18.

[494] Berger, "Foreword," 1.

[495] U.S. Marine Corps, *Learning*, 1–3.

[496] U.S. Marine Corps, 2–4.

warfighters."[497] Therefore, MCDP 7 states, "continuous, disciplined, and progressive learning is necessary for warfighting readiness."[498]

Although MCDP 7 primarily focuses on a professional purpose for learning, it alludes to personal purposes as well by recognizing intrinsic motivation as a factor in learning. MCDP 7 states, "intrinsic motivation is driven by perceived internal rewards; that is, one is driven to engage in a behavior because it is satisfying."[499] It advocates that leaders cultivate intrinsic motivation by instilling a growth mindset.[500] For this reason, MCDP 7 states, "the Marine Corps culture of learning encourages commanders, leaders, instructors, teams, and individuals to all support intrinsic motivation for learning and self-improvement."[501]

B.   BENJAMIN FRANKLIN CASE STUDY

The purpose of the case study is to provide an empirical example of a person who committed to lifelong learning and, as a result, achieved extraordinary success. An analysis of the case study using the lifelong learning conceptual framework shows that Benjamin Franklin encompassed multiple elements within the themes. For the time frame, Benjamin Franklin exhibited the cradle-to-grave approach. With respect to contexts, he engaged in formal, informal, and non-formal learning. Likewise, Benjamin Franklin had multiple purposes for learning that started with the personal and professional but grew to include economic and democratic purposes as well.

1.   Time-Frame

The Franklin case study exemplifies the cradle-to-grave time-frame for learning. The cradle-to-grave time-frame embraces the literal meaning of "lifelong," in which learning begins at birth and continues throughout a person's life. Franklin recalls, "from a

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[497] U.S. Marine Corps, 3–20.

[498] U.S. Marine Corps, 4–12.

[499] U.S. Marine Corps, 2–13.

[500] U.S. Marine Corps, *Learning*.

[501] U.S. Marine Corps, 2–13.

child I was fond of reading," and he continued to be a prolific reader for the remainder of his life.[502] Franklin states that he had an "early readiness in learning to read (which must have been very early, as I do not remember when I could not read)."[503] After Franklin completed his compulsory education, he continued to learn through reading. His fondness for reading is what led to his profession as a printer. Once Franklin retired at the age of forty-two, he dedicated the next five years of his life to learning and science. Although Franklin continued to conduct scientific experiments throughout his life, he leveraged his learning to become a politician and diplomat. Franklin served as a public official for the remainder of his life. He expanded beyond being a printer after retirement and became a scientist, inventor, politician, diplomat, and philanthropist through his habitual learning.

2.   Context

Franklin exhibited all three learning contexts: formal, informal, and non-formal. Although Franklin used all three contexts, the formal context is the least prevalent in his life. Franklin's only learning within a formal context occurs in Franklin's adolescence from age ten to twelve, for a total of two years. The first year he spent enrolled in the Bostin Latin School, and the second year he studied under George Brownwell, where he excelled in writing but failed in arithmetic. Franklin did not receive any other formal education after his initial two years as a child.

Learning through informal contexts played an important role in Franklin's life. Franklin learned informally through his observations and interactions with people in his daily life. Furthermore, Franklin masterfully intertwined his informal learning with his non-formal learning. Franklin used his observations of people or phenomena that he learned informally to direct his non-formal learning. For example, Franklin observed while swimming that the power to propel himself in the water was generated from his hands and feet. He then hypothesized that an increase in surface area would lead to an increase in power. Thus, he conducts an experiment in which he creates paddles to attach to his hands and feet to test his hypothesis. Conversely, Franklin also applied the knowledge he learned

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[502] Franklin, *The Autobiography of Benjamin Franklin*, 13.

[503] Franklin, 10.

non-formally to his life, which often led to informal learning through insightful observations. For example, Franklin learned the Socratic method by reading about it in *The Spectator* and applied it to his life. Based on his conversations with people while using the Socratic method and observations of people's reactions, Franklin learned that he was able to be more persuasive using it than when he was being argumentative or confrontational. Franklin concluded that being "disputatious" was a bad habit that can lead to "disgusts and, perhaps enmities where you may have occasion for friendship."[1]

The non-formal context was the dominant learning context that Franklin used throughout his life. The key factor distinguishing his non-formal learning from his informal learning is that it was intentional. Franklin intentionally engaged in several activities throughout his life with the specific purpose to learn. Non-formal learning activities that he engaged in include reading, deliberate and focused practice, self-reflection and tracking, and engaging with members of a mastermind.

a. Reading

Franklin's dominant and preferred method of non-formal learning was to read books. At 10 years old, he read a series of books that had a profound impact on his life. Although he did not initially have a purpose for reading, he quickly saw that he could learn valuable lessons from books that could be applied to his life. Franklin leveraged his ability to learn from reading to indulge his personal interests, increase his knowledge, and improve upon his strengths and weaknesses throughout his life.

b. Apprenticeship

Franklin served as an apprentice in the printing trade from age twelve to twenty before he became a printer himself. During the eight years in his apprenticeship, he learned the skills necessary for his trade. Skills included writing, proofreading, editing, operating necessary machinery, and managing the financial accounts associated with running a business. The apprenticeship is equivalent to today's "on-the-job" training, commonly referred to as OJT.

c.   Deliberate and Focused Practice

Franklin used deliberate and focused practice in order to improve upon a particular skill. Most notably, when Franklin perceived that he was lacking in his writing ability, he devised his own exercises to improve his writing and vocabulary. Each exercise was deliberately created to focus on improving a specific skill. To improve his ability to organize his writing to be logical and sound, Franklin scrambled the order of essays and reconstructed them. To increase his vocabulary, he turned essays into verse, which forced him to consider different words to use that had the same meaning but differed in length, measure, sound, or rhyme. Moreover, he constantly compared his work to the originals to discover mistakes and correct them.

d.   Self-reflection and Tracking

Franklin constantly strove to grow and improve in every aspect of his life. By reflecting on his life, Franklin became aware that he needed a plan for his life to ensure he was in congruence with his desired self. His plan for conduct marked his first attempt to improve his character. Eventually, he replaced his plan for conduct with his moral perfection project, which was his attempt to achieve moral perfection by adhering to a list of thirteen virtues he deemed valuable. With the parameters for his self-imposed moral perfectional project set, Franklin held himself accountable by keeping track of his daily actions to ensure they were aligned with his goals. Using his moral perfection tracker, Franklin maintained conscious awareness of his effort. Furthermore, his daily scheme of order enabled him to set his intention for each day based on his priorities and reflect on whether or not he accomplished what he intended. His practice of daily reflection and tracking his actions provided a feedback loop for him to evaluate his progress. Based on his reflections, Franklin was able to reinforce his actions to form positive habits or adapt his behavior if necessary.

e.   Mastermind

Regardless of where Franklin lived, he always surrounded himself with like-minded individuals that he could learn from and explore new ideas. Most notably, was the formation of his mutual-improvement club, the Junto, which was comprised of his most

"ingenious acquaintance [s]."[504] The purpose of the club was to learn, improve their writing and critical thinking skills, and expand their knowledge in areas such as morals, politics, and philosophy. The Junto later became a launching pad for several of Franklin's civic projects including the Library Company of Philadelphia, Union Fire Company, American Philosophical Society, and the Pennsylvania militia. Franklin regularly attending meetings in the Junto for 30 years to facilitate his growth and learning.

f. Designed Experiments

When Franklin wanted to test a hypothesis, usually based on his observations of a phenomena, he designed and conducted experiments. Although Franklin conducted experiments throughout his life, he devoted five years to experimenting after retiring. He is most well-known for his kite experiment where he discovered that lightning is a discharge of electricity.

3. Purpose

The case study showcases that Franklin had many purposes for learning rather than focusing on one specific purpose. Although Franklin's purpose for learning began with the personal purpose, it eventually transcended into the professional, economic, and democratic purposes.

The case study showed that Franklin embraced a personal purpose for learning, which encompasses an individual's desire for personal fulfillment, growth, and development. Franklin constantly strove to improve in every aspect of his life. Not only did he focus on improving specific skills, as noted by his consistent and deliberate practice of writing exercises, Franklin also wanted to grow as a person. His moral perfection project provided a map and accountability system to ensure he was strengthening his character in the virtues he deemed valuable.

In addition to his insatiable desire for self-improvement, his learning motivations typically stemmed from his personal interests and curiosities but incorporated other

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[504] Franklin, 56.

purposes with time. This is best demonstrated by his personal interest and fascination with electricity. Although he found learning about and experimenting with electricity entertaining, his personal interest transcended into economic and democratic purposes as he discovered practical and beneficial uses for his inventions.

C.   CONCLUSION

The lifelong learning conceptual framework was utilized to analyze MCDP 7 and the Benjamin Franklin case study. The analysis of MCDP 7 showed that it uses a career time frame, formal and informal contexts, and professional purpose for learning. In contrast, the Benjamin Franklin case study revealed that he used a cradle-to-grave time frame, and all learning contexts and purposes. The next chapter the findings and recommendations of the study.

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VI.   FINDINGS, RECOMMENDATIONS, AND CONCLUSION

The purpose of this chapter is to provide the findings and recommendations of the study. Additionally, it discusses implications and further lines of inquiry that arose but were outside of the scope of the study. To address these inquiries, recommendations for future research are included.

A.   SUMMARY

The United States is operating in an era of great power competition as its twenty-five-year period of military dominance is steadily declining. Near-peer competitors, such as Russia and China, have developed physical assets and technological capabilities that rival the United States', resulting in a level playing field. In order to maintain a competitive advantage, military members must be able to gain an intellectual edge against our adversaries. Thus, education has been identified as a strategic asset in ensuring national security, and preparing military members' for the uncertain and chaotic nature of war. However, PME has stagnated as it is rooted in teaching methods based on an industrial age, requiring students to simply memorize and regurgitate facts.[505]

In order to be successful in a Cognitive Age, the publication of MCDP 7 outlines the Marine Corps' learning philosophy, which establishes continuous learning as a professional responsibility and a necessity for success in a profession of arms.[506] In particular, warfighting readiness stems from Marines' ability to learn and develop the skills and competencies necessary to effectively execute maneuver warfare and the OODA loop.[507] In order to optimize learning in a Cognitive Age, MCDP 7's learning philosophy is grounded in neuroscience, psychology, and andragogy. To explore additional approaches to learning, conceptual elements of lifelong learning are evaluated.

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[505] Secretary of Defense, "Summary of the 2018 National Defense Strategy of The United States of America"; Mullen III, "TECOM Commander's Guidance."

[506] U.S. Marine Corps, *Learning*.

[507] U.S. Marine Corps.

The ambiguity of the term "lifelong learning" has resulted in no standardized definition. Using the literature review, a conceptual framework on lifelong learning was constructed, which is comprised of three themes: time frame, context, and purpose. The time frames for lifelong learning describe when, during a person's life, learning should be begin and end, and include cradle-to-grave, career, and adulthood. To demonstrate the different starting and ending times for each time frame, a person's life span is separated into three phases: adolescence, career, and post-career. Lifelong learning contexts involve what type of setting learning is conducted in and include formal, informal, and non-formal. Lifelong learning purposes encompass personal, professional, economic, and democratic. To act as an empirical example, a case study on Benjamin Franklin is utilized. The case study is used as a base to compare to MCDP 7. The analysis conducted provides a categorization of the lifelong learning themes for MCDP 7 and the Franklin case study so that they can be compared against each other to draw insights from their similarities and differences.

Using the lifelong learning conceptual framework, the analysis of MCDP 7 shows that it uses a career time-frame, formal and informal learning contexts, and the professional purpose for learning. The analysis of the case study shows that Franklin utilized a cradle-to-grave time-frame, all three learning contexts, and multiple purposes for learning. The following findings and recommendations provided in this chapter derive from the analysis and comparison of MCDP 7's learning philosophy with Franklin's actual learning exemplified by the case study.

B. FINDINGS AND RECOMMENDATIONS

1. Finding #1: Time Frame

MCDP 7 focuses on the career time frame for lifelong learning, beginning once a Marine joins the Marine Corps and continuing throughout a Marine's career. It does not use the cradle-to-grave time frame because the Marine Corps cannot influence a Marine's learning before joining. It also does not use the adulthood timeframe since it does not refer to learning after retirement and focuses solely on career-long learning.

a.   Recommendation

It is recommended that future research is conducted to explore how the relationship between a person's early learning experiences influences their capacity to learn later in life. A key component to the cradle-to-grave time frame is that lifelong learning begins in adolescence because learning experiences early in life influence a person's willingness and capacity to learn past compulsory education.[508] Likewise, the case study suggests that learning during the adolescent phase of life is important in shaping a person's overall learning experience. Although the Marine Corps cannot influence a Marine's learning before joining, perhaps, a Marine's initial training can be structured in a way that emulates the adolescence phase of the cradle-to-grave lifelong learning time frame. Emphasizing building a learning foundation at the beginning of Marine's career can improve their ability to sustain learning throughout their careers.

Furthermore, future research is recommended to determine whether people who continue to learn post-career achieve better results or higher levels of achievement during their career in comparison to those who do not choose to continue learning after retirement. If that is the case, further research is recommended to explore why some people continue to learn beyond their careers, and others do not. The case study suggests that a strong commitment to learning during a person's career resulted in a commitment to learning post-career as well. MCDP 7's learning philosophy can possibly be inhibiting because it focuses solely on career-long learning.

2.   Finding #2: Context

The learning contexts utilized in MCDP 7 are formal and informal, but its conception of informal includes elements of non-formal learning consistent with the literature on lifelong learning.

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[508] European Commission, "A Memorandum on Lifelong Learning"; Hargreaves, *Learning for Life: The Foundations for Lifelong Learning*.

a.   Recommendation

It is recommended that MCDP 7 modify its definition of informal learning in future revisions to be consistent with the literature on lifelong learning and include non-formal learning to its philosophy in future revisions. The literature on lifelong learning encourages the concept of lifewide learning, which recognizes that learning occurs in formal, informal, and non-formal contexts.[509] According to the EC, the distinction between informal and non-formal is important because informal learning is often non-intentional, "whereas non-formal learning is more intentional and structured."[510] Furthermore, the case study showed an interactive relationship between informal learning and non-formal learning. Distinguishing informal learning from non-formal learning highlights the complementary nature of the two, which can be beneficial to tailoring self-directed learning outside of formal contexts. The combination of formal, informal, and non-formal learning could enhance MCDP 7's learning philosophy because it can enable Marines to create more learning opportunities for themselves.

3.   Finding #3: Purpose

MCDP 7 predominantly focuses on the professional purpose for learning but acknowledges that personal purposes such as intrinsic motivation are influential in sustaining professional development.

a.   Recommendation

Further research is recommended to explore the different purposes for lifelong learning and their relationship to people's motivation or commitment to engage in learning throughout their lives for possible incorporation into MCDP 7. The case study suggests that people's learning purpose does not operate in isolation; rather, one purpose transitions into and fuels another. The case study suggests there is an interactive relationship where having multiple purposes for learning intensifies and enhances the learning experience. Specifically, the case study shows how different purposes for learning can stem from a

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[509] European Commission, "A Memorandum on Lifelong Learning."

[510] European Commission, "Making a European Area of Lifelong Learning a Reality."

personal purpose. Embracing additional purposes for learning could enhance the Marine Corps' ability to foster a stronger commitment to learning, which can help achieve MCDP 7's goal of creating "adaptive leaders capable of successfully conducting maneuver warfare in complex, uncertain, and chaotic environments."[511]

C.   IMPLICATIONS AND FUTURE RESEARCH

Throughout the course of this research, additional observations have arisen that are outside the scope of the study and warrant further investigation. Firstly, further research is recommended to explore the possibility of learning identities. The case study suggests that learning was a part of Franklin's identity rather than merely an activity he engaged in throughout his life. Because Franklin viewed himself as a lifelong learner, his decisions, actions, and habits supported that identity. Since Franklin exhibited the cradle-to-grave lifelong learning time frame, it is worth exploring if, over time, learning can become a part of a person's identity. Specifically, is there a distinction in the learning of a person who views themselves as a lifelong learner instead of a person who engages in learning throughout their life? If a learning identity as a lifelong learner can be developed, it could support the use of the adulthood time frame. Further research is recommended to explore if and how learning identities are developed.

Secondly, future research is recommended to explore if there are specific traits, habits, attitudes, and skills of lifelong learners. MCDP 7 defines learning as "developing knowledge, skills, and attitudes through study, experience, or instruction."[512] The case study revealed that Franklin had a multitude of traits, habits, and attitudes that strengthened and complemented his ability, and preference, to engage in lifelong learning. Since MCDP 7 expresses that developing skills and attitudes is important, surveys or additional case studies of lifelong learners could provide further insight.

In particular, special attention should be given to the skills, habits, and attitudes for the various types of non-formal learning media introduced in the Commandant's

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[511] U.S. Marine Corps, *Learning*, 1–3.

[512] U.S. Marine Corps, 1–3.

professional reading list (CPRL). Recently, the Marine Corps updated its Commandant's professional reading program (CPRP), introducing different mediums for learning to include podcasts, articles, and discussion guides.[513] In General Mullen's Marine Corps Gazette article, "Advanced Reading Skills: Techniques to getting started," he asserts that Marines need to change their attitude towards reading to embrace it as a positive choice and develop skills to make reading more effective.[514] Expanding upon Mullen's article to include other forms of media is worth further exploration.

Finally, future research is recommended to explore how the Cognitive Age's defining characteristics can support and complement MCDP 7's learning philosophy. The United States is transitioning from an industrial age to a Cognitive Age, where information is readily available and easily obtained. Similarly, the environment Franklin lived in marked a transition from a Puritan Age to the Age of Enlightenment, where science, reason, and critical thinking were valued. The transition to the Age of Enlightenment played a critical role in Franklin's ability and willingness to experiment and pursue scientific study. Although information is readily available for Marines to learn, the case study suggests that the practical application of knowledge learned can create conditions to further learning informally through observation and adaption, which is similar to the OODA loop decision-making process. Further research can be beneficial to MCDP 7 by identifying the characteristics of the Cognitive Age that can facilitate or inhibit learning.

D.   CONCLUSION—FIRST TO LEARN

This research was designed to extend the discussion regarding the learning philosophy outlined in MCDP 7. Using the lifelong learning conceptual framework, elements of lifelong learning were examined to explore alternative learning approaches that can be leveraged to increase Marines' "buy in" to learn. Future research into how the cradle-to-grave and adulthood timeframes can be incorporated to strengthen Marines'

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[513] U.S. Marine Corps, "Revision of the Commandant's Professional Reading Program," Marines.mil, October 20, 2020, https://www.marines.mil/News/Messages/Messages-Display/Article/2386702/revision-of-the-commandants-professional-reading-program/.

[514] William F. Mullen III, "Advanced Reading Skills: Techniques to Getting Started," *Marine Corps Gazette* 103, no. 4 (April 2019): 81–85.

capacity and commitment to learning is recommended. To accommodate the learning necessary in a Cognitive Age, adopting a lifewide perspective to learning that incorporates formal, informal, and non-formal learning can enable Marines to intertwine their learning experiences effectively and take advantage of all learning opportunities. Additionally, future research is recommended to explore how encouraging multiple learning purposes can enhance rather than detract from professional development. The findings, recommendations, and areas for future research in this chapter identify lifelong learning concepts that MCDP 7 can leverage to strengthen and expand its learning philosophy. In addition to being "First to Fight," this study seeks to lay the foundation for implementing lifelong learning concepts in MCDP 7 to instill in Marines the necessity to be "First to Learn."

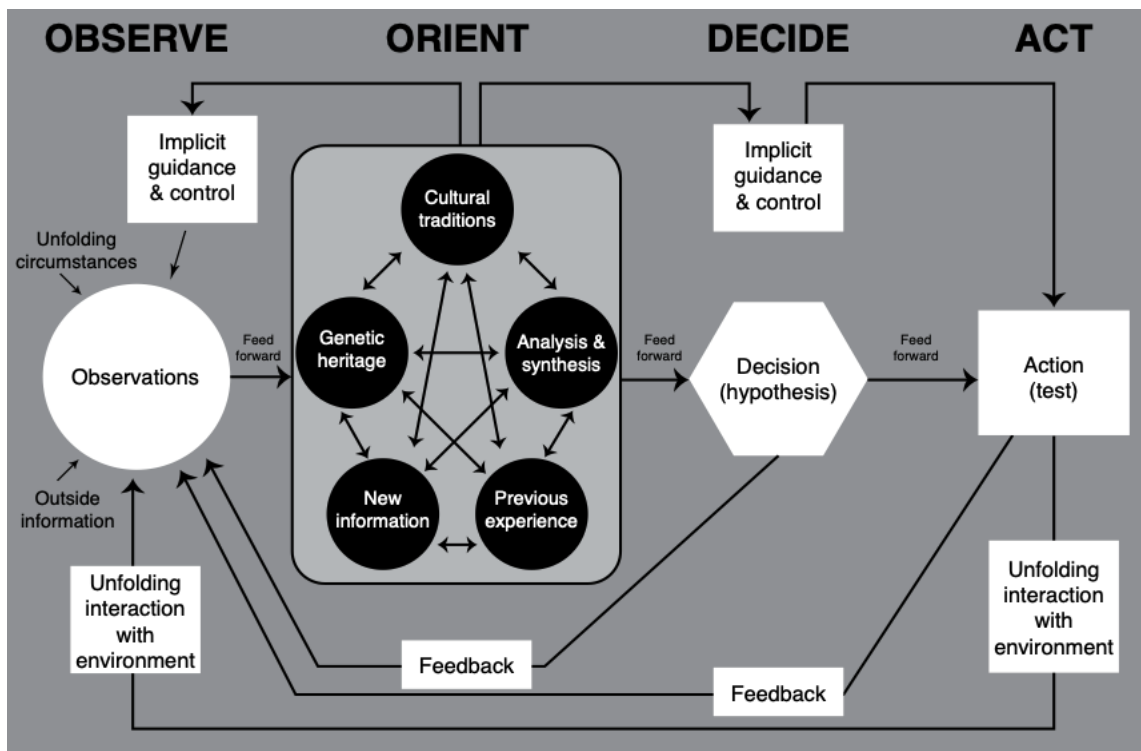THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX A. BOYD'S REAL OODA LOOP

Figure 7.   Boyd's Real OODA Loop[515]

* Boyd's depiction of the OODA loop illustrates a complex, open-ended, and cross-referencing process rather than the simple cyclic depiction that the military has adopted.[516]

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[515] Source: John R. Boyd, "The Essence of Winning and Losing," 3, https://fasttransients.files.wordpress.com/2010/03/essence_of_winning_losing.pdf.

[516] Boyd, "The Essence of Winning and Losing."

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APPENDIX B. STANDING QUERIES FOR THE JUNTO[517]

Have you read over these queries this morning, in order to consider what you might have to offer the Junto [touching] any one of them?

1. Have you met with anything in the author you last read, remarkable, or suitable to be communicated to the Junto? Particularly in history, morality, poetry, physic, travels, mechanic arts, or other parts of knowledge.

2. What new story have you lately heard agreeable for telling in conversation?

3. Hath any citizen in your knowledge failed in his business lately, and what have you heard of the cause?

4. Have you lately heard of any citizen's thriving well, and by what means?

5. Have you lately heard how any present rich man, here or elsewhere, got his estate?

6. Do you know of any fellow citizen, who has lately done a worthy action, deserving praise and imitation? or who has committed an error proper for us to be warned against and avoid?

7. What unhappy effects of intemperance have you lately observed or heard? of imprudence? of passion? or of any other vice or folly?

8. What happy effects of temperance? of prudence? of moderation? or of any other virtue?

9. Have you or any of your acquaintance been lately sick or wounded? If so, what remedies were used, and what were their effects?

10. Who do you know that are shortly going voyages or journeys, if one should have occasion to send by them?

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[517] Benjamin Franklin, "Standing Queries for the Junto," 1732, https://founders.archives.gov/documents/Franklin/01-01-02-0088. Franklin created this set of twenty-four queries to be read and answered at each Junto meeting.

11. Do you think of anything at present, in which the Junto may be serviceable to *mankind*? to their country, to their friends, or to themselves?

12. Hath any deserving stranger arrived in town since last meeting, that you heard of? and what have you heard or observed of his character or merits? and whether think you, it lies in the power of the Junto to oblige him, or encourage him as he deserves?

13. Do you know of any deserving young beginner lately set up, whom it lies in the power of the Junto any way to encourage?

14. Have you lately observed any defect in the laws of your *country*, [of] which it would be proper to move the legislature for an amendment? Or do you know of any beneficial law that is wanting?

15. Have you lately observed any encroachment on the just liberties of the people?

16. Hath anybody attacked your reputation lately? and what can the Junto do towards securing it?

17. Is there any man whose friendship you want, and which the Junto or any of them, can procure for you?

18. Have you lately heard any member's character attacked, and how have you defended it?

19. Hath any man injured you, from whom it is in the power of the Junto to procure redress?

20. In what manner can the Junto, or any of them, assist you in any of your honourable designs?

21. Have you any weighty affair in hand, in which you think the advice of the Junto may be of service?

22. What benefits have you lately received from any man not present?

23. Is there any difficulty in matters of opinion, of justice, and injustice, which you would gladly have discussed at this time?

24. Do you see anything amiss in the present customs or proceedings of the Junto, which might be amended?

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