



# Holistic Approach to Leadership Education: A Case Study of the Undergraduate Leadership Development Program at the U.S. Coast Guard Academy

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**Abstract-** The United States Coast Guard Academy (USCGA) is an undergraduate institution that offers degrees in eight majors. Since 1876, the USCGA has served as one of the most important pillars responsible for instilling principles of leadership and ethics into the training and education of officers for the United States Coast Guard. The Academy's mission within the Leadership Training program is to "educate, train, and develop leaders of character who are ethically, morally, intellectually, and professionally prepared to serve their country and humanity." Leadership development at the Academy is achieved through curricular and extra-curricular programs with collaboration between specific academic, military and athletic programs. This unique trait of the leadership development is based on development in four stages: *leading self, leading others, leading performance and change, and leading the Coast Guard*. Cadets are exposed to leadership via curricula and integrating theory with practice through co-curricular experiences, service learning experiences, community service and club activities. This leadership development process serves as a framework that could be modified and adopted by other undergraduate educational programs.

**Keywords-** Education, Leadership, Organizational Success, Self-Leadership, Strategies

Research and Computer Analysis, and Marine and Environmental Science. The unique trait of the leadership development at the USCGA is based on development in four stages: *leading self, leading others, leading performance and change, and leading the Coast Guard*. Leadership development is accomplished by exposing cadets to models of leadership via curriculum and integrating theory with practice through extra-curricular and service learning experiences to fuse academics, military training, and the athletic programs. During four years of academic, military and athletic programs, the Commandant of Cadets, academic faculty, Department of Athletics, and the Leadership Development Center work together with the Corps of Cadets to guide and monitor cadets' development and implementation of moral, ethical, leadership and other professional skills.

The authors argue that a combination of military, academic and athletic programs that are delivered via the curricular and extra-curricular activities effectively advance the *leading self* and *leading others* components of leadership development. The practices and experiences of leadership development at USCGA provide an insight into leadership skills development that prepare leaders who are capable for *leading performance and change*. This leadership development process serves as a framework that could be modified and adopted by other undergraduate educational programs.

## I. INTRODUCTION

The United States Coast Guard Academy (USCGA) has been educating future leaders for the U.S. Coast Guard (USCG) since 1876. The USCGA, located in New London, Connecticut, is the smallest of the United States federal military academies with a mission to "educate, train and develop leaders of character who are ethically, intellectually, and professionally ready to serve their country and humanity". An academy-wide culture of leadership is required to facilitate learning across academic disciplines, military and athletic training. This paper presents an example of leadership development where cadets are trained to become leaders through a formal leadership education that is incorporated into eight academic disciplines: Civil Engineering, Electrical Engineering, Mechanical Engineering, Naval Architecture and Marine Engineering, Government, Management, Operations

## II. LITERATURE REVIEW

Researchers have recognized how organizational structure and management strategy can assist in bringing technology innovation, effectiveness, and competitive advantage to organizations [1, 2, 3]. Leadership has been considered as the most important source of advancing competitive advantage. Effective organizations require leaders who can determine and deliver desired changes in structure, cultural climate, process, and governance within their organizations [4]. Organizations need leaders who are equipped to embrace change and uncertainty as well as train their followers to face the constantly increasing changes and challenges in business and government environment [5, 6]. Effective leaders are those who can transform their organizations into creative, effective, and productive enterprises by providing their organizations

with the direction, vision, drive, motivation, and push to bring success [7]. Successful leaders contribute to the achievement of organizations [8] by enhancing organizational performance [9] and increasing employees' satisfaction and improving employees' motivation [8, 9, 10]. Kouzes and Posner argue that leadership works when values are clarified, understood, and aligned with action [11]. According to Wheatley and Frieze, true leaders take action to create the world they want to see and encourage others to act precisely in the same manner [12].

Leadership is the "...process of influencing the activities of an organizational group in the efforts toward goal setting and achievement..." [13], while the term self-leadership is defined as "...a process of influencing oneself to achieve the self-direction and self-motivation necessary to behave and perform in desirable ways..." [14]. Manz and Sims [15] contend that individuals should be trained in self-leadership first so they lead themselves before they start leading their organizations. They also argue that leadership skills must build upon organizational values and principles. Their actions should be coined from a deep sense of commitment to their ideologies, codes, and values that include justice, equity, respect, honesty, integrity, stability, humility, creativity, flexibility, openness, diversity, and sense of community [16].

Neck [17] indicates that self-leadership is critical to organizational effectiveness as efficient self-leaders are more dynamic and less resistant to organizational change and hence more impactful on organizational productivity and technological creativity. As a process, leadership works to create productive human relationships through effective communication [18]. Leadership is made up of strong oral and written communications, interpersonal skills, and the ability to manage problems and the task environment. Communication is considered a valued leadership skill where interaction with others allows leaders to engage in conversation and enables them to be attentive, perceptive, and responsive to others.

Thayer [19] presents an approach to the study of leadership consisting of the examination of leader characteristics, follower requirements and characteristics, and analysis of strategies on how to develop various skills so that leaders will effectively communicate, engage, build, trust, influence, and understand people and their motivations while leading their organizations. Kaiser et al. [20] argues that leaders who can influence, plan, coordinate, guide, and decide, as these skills form a core competency of the military are needed. Military organizations have been pioneers in the leadership field delivering instruction on leadership that ranges from the entry level, into the officer corps, and even the flag officer level [21].

Academic institutions' integration of leadership theory with real world practices has gained a fundamental role in demonstrating the importance of self-leadership and leadership education [22, 23]. Brown and Posner [24] believe that leadership development is a learning process where students learn to lead both through appropriate classroom education with specifically designed learning objectives and real life experiences [25]. Similarly, Day [26] argues that leadership education must consist of the development of professional skills such as communication, critical thinking, and business

competencies together with leadership growth where the personal integration of theory is mixed with practice and training. According to the 2014 *U.S. News and World Report* rankings, the mission statements from the top five U.S. business schools all include leadership education as a central precept:

- **University of Pennsylvania:** "Our mission is to create ideas that deepen and advance our understanding of management and with those ideas to develop innovative, principled, and insightful leaders who change the world;"
- **Northwestern University:** "Prepare business leaders to fuel the growth of industries and economics on a global scale;" and "Our purpose is to educate, equip and inspire leaders who build strong organizations and wisely leverage the power of markets to create lasting value;" and
- **Massachusetts Institute of Technology:** "The mission of the MIT Sloan School of Management is to develop principled, innovative leaders who improve the world and to generate ideas that advance management practice."

Sowcik and Allen [27] also argue that "In line with these mission statements, many of the top 50 business schools are building infrastructure to support their mission within and outside the classroom. Business schools across the United States are building programs, centers, and executive education offerings to achieve their objectives of developing leaders. Educators and managers no longer debate the merits of leadership as a core function of business – but rather, the more relevant challenge today is in developing models that truly develop leaders."

This paper builds on the above discussion to argue that leadership development by itself does not lead to effective advancement of leadership skills. The authors argue that it is essential to develop an educational model that embraces development of strong and organization-based self-leadership and followership skills. The paper presents *The CG Leadership Development Program* and *the L.E.A.D. Program* for cadets' leadership education and training that are specific to the leadership development. At USCGA, the five learning objectives that include: leadership, communication, business competencies, critical thinking, and information literacy skills, must be advanced, practiced, and mastered during four years of undergraduate study to produce effective leaders. The strategy of leadership development advanced by the USCGA represents a framework that can be implemented by other academic undergraduate programs to produce effective and ethical leaders.

### III. BACKGROUND ON THE USCGA LEADERSHIP COMPETENCIES AND LEADERSHIP EDUCATIONAL STRATEGIES

The United States Coast Guard (USCG) is a federal organization that provides services to the people of the United States under the direction of the Department of Homeland Security (DHS). The USCG is responsible for providing leadership and creating a working environment that enables all USCG members to reach their full potential and to contribute fully to the USCG's mission. The leadership development

process for the organization has been based on the Leadership Development Program that defines the USCG's core values of "Honor, Respect, and Devotion to Duty" which outline the behaviors that all USCG members abide by. USCG COMMANDANT INSTRUCTION 5351.1 [28] outlines the USCG's definitions of vision, leadership, effective leadership, and leadership development. All definitions are as follows:

- **Vision:** a fully integrated Leadership Development Program encompassing the entire CG work force through their time in service.
- **Leadership:** the ability to work through others to accomplish a task.
- **Effective Leader:** a leader whose followers are committed to and achieve desired results by having the right tools, information, and working environment.
- **Leadership Development:** a system by which an organization grows its work force into leaders.

Responsibility for leadership development is divided among three pillars (individual, unit and organization). According to the Commandant of the USCG: "...the individual element includes identifying one's own strengths and shortcomings, developing a personal plan for improvement, and taking initiative in pursuing education. The unit provides support such as formal and informal indoctrination and training, counselling, and mentoring. The Coast Guard organization provides formal systems and processes such as assignments, policy, training, and education..." [28]. The structure of the CG Leadership Development Program is illustrated in Figure 1.

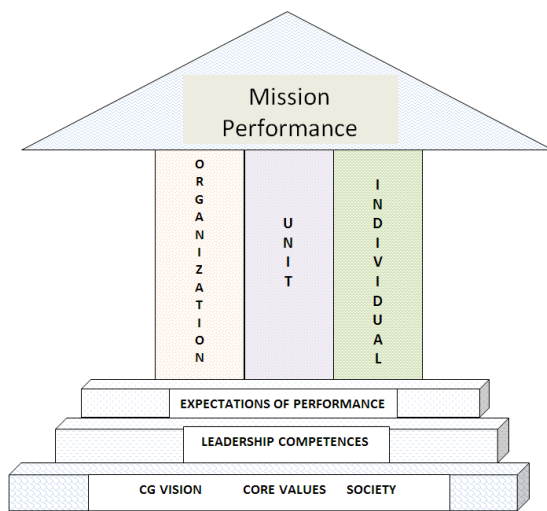


Figure 1. USCGA Leadership development program

This model indicates that for the leadership to be effective, all three pillars require equal attention and have identical responsibilities for leadership competency development, improvement, and performance. The constructive element of

the three-pillar leadership model is that responsibility of leadership development and improvement is shared among all members of the service. Each individual whether an enlisted person, an officer, or leader from the civilian workforce is required to develop professional and leadership competencies to effectively contribute to the CG mission. Expectations of leadership performance and responsibilities increase with rank and years of service. Top leadership requires greater commitment to understanding, mastering, and exercising leadership competencies.

The USCGA is an undergraduate academic institution aimed at providing an academic education, as well as physical and military training to cadets who serve as leaders in the USCG after graduation. The Academy's mission within the Leadership Training program is to "educate, train, and develop leaders of character who are ethically, morally, intellectually, and professionally prepared to serve their country and humanity." The Academy awards Bachelor of Science degrees in eight majors that include: Civil Engineering, Electrical Engineering, Mechanical Engineering, Naval Architecture and Marine Engineering, Government, Management, Operations Research and Computer Analysis, and Marine and Environmental Science. USCGA delivers undergraduate academic coursework that is supported through required courses within humanities, science, engineering, mathematics, maritime studies, organizational behavior, management, and maritime law. The USCGA civilian faculty, Permanent Commissioned Teaching Staff, and rotating military officers are charged with delivering, maintaining, and assessing the Leadership Training programs to ensure that the knowledge, skills, and expertise cadets acquire meet USCG expectations.

The USCGA's definition of a Leader of Character is divided into four categories with 28 competencies shown in Figure 2: (1) *leading self*, (2) *leading others*, (3) *leading performance and change*, and (4) *leading the Coast Guard*. For example, *leading self* is essential to successful development of a leader as leaders must understand "self and one's own abilities" such as personality, values, and preferences, while simultaneously recognizing their own potential. *Leading others* involves working with and influencing others to achieve shared goals. USCG members are required to interact with others and those positive professional relationships provide a foundation for the success of completing missions. *Leading performance and change* requires USCG members to continuously face challenges in mission operations as challenges change overtime.

To meet these challenges, leaders must acquire and apply twenty-eight (28) performance competencies to their daily activities. *Leading the Coast Guard* implies that leaders must understand how their leadership style fits into a broader structure of department, branch, government, and the nation. At a local level, leaders often develop partnerships with public and private sector organizations to accomplish USCG missions. Leaders must thoroughly understand how *money*, *people* and *technology* work together within the organization and how they must interact with similar structures outside the organization. The USCGA's leadership Development Framework is illustrated in Figure 2.

IV. ADVANCEMENT OF LEADERSHIP SKILLS AT USCGA

To advance development in the four leadership categories, the USCGA approach uses three groups of activities or basic

components: academics, non-academics (includes *military and athletics*), and professional practice (*community and service learning, cadet organizations, and clubs*) as illustrated in Figure 3.

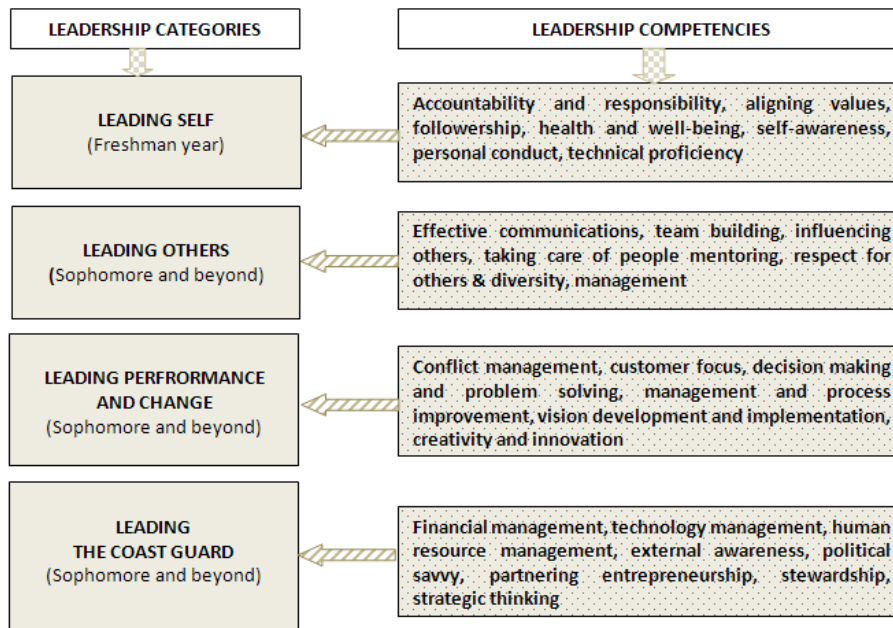


Figure 2. Leadership development framework at USCGA

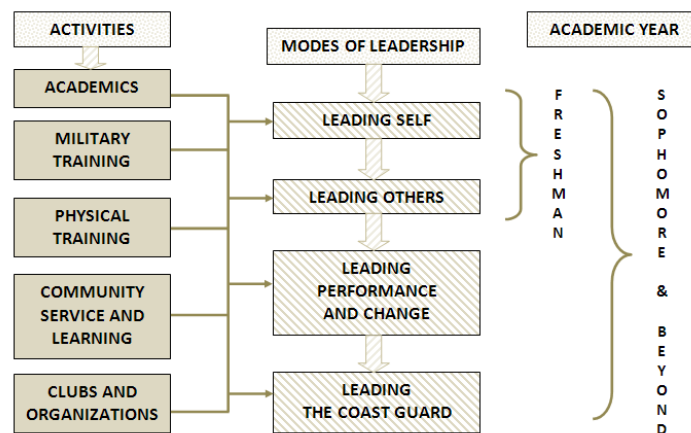


Figure 3. Advancement of leadership components

A. Academics

The USCGA is an undergraduate academic institution that focuses on educating, training, and developing leaders of character who will serve as leaders in the USCG. To accomplish this, the USCGA developed and uses five basic shared learning outcomes that promote meeting the mission objectives of the academic and professional training programs.

These USCGA learning outcomes are presented and explained in the following paragraphs:

- **Leadership Abilities:** Graduates shall be military and civilian leaders of character who understand and apply sound leadership principles and competencies. This includes the ability to direct, develop, and evaluate diverse groups; to function effectively and ethically as a leader,

follower, facilitator or member of a team; and to conduct constructive assessment of self and others.

- **Personal and Professional Qualities:** Graduates shall maintain a professional lifestyle that embraces the Coast Guard Core Values of Honor, Respect and Devotion to Duty, includes physical fitness and wellness, and demonstrates the customs, courtesies and social skills befitting members of a maritime military service. Graduates shall also have a sense of Coast Guard maritime heritage and an understanding of the roles that the Coast Guard and the nation play in the global environment.
- **Communication Effectiveness:** Graduates shall be able to write clearly, concisely, persuasively, and grammatically; prepare and deliver well-organized and polished oral presentations; read and understand a variety of written materials; listen thoughtfully to oral arguments; respect diverse opinions; and formulate reasoned alternatives and responses.
- **Ability to Acquire, Integrate and Expand Knowledge:** Graduates shall have developed the motivations and skills for “lifelong learning.” Graduates shall be able to create a working conceptual framework that lends itself to continued expansion. To accomplish this, graduates shall be able to efficiently access a broad range of information sources, locate and interpret desired data reliably, employ appropriate technology, and integrate knowledge. Graduating cadets shall also have acquired and integrated the specific in-depth knowledge required of both an academic major and an entry-level professional assignment.
- **Critical Thinking Ability:** Graduates shall be able to accomplish complex tasks in a broad range of contexts by applying the basic skills of critical analysis, systems thinking, quantitative reasoning, risk management, creative problem solving, and value-based decision-making.

During four years of undergraduate studies, cadets are required to develop and master leadership abilities, personal and professional qualities, communication effectiveness, ability to acquire, integrate and expand knowledge, and critical thinking skills.

#### 1) Leadership Abilities

The academic component of leadership training and development at the USCGA is supported by a strong “Core Curriculum” of science, math, engineering, professional studies and humanities courses; approximately 100 credits must be successfully completed by every cadet prior to graduation in addition to the major specific requirements of at least 40 credits. In the present core curriculum, during the freshman year, cadets across all majors are required to take two courses: *Leaders in US History*, and *Macroeconomic Principles*. In the *Leaders in US History* course, cadets survey major developments in US History through the lens of key leaders where they evaluate different models of effective and ineffective leadership and management. They are also required to take *Macroeconomic Principles* to understand basic

economic concepts as well as develop competency in financial management. During the sophomore year, cadets complete two courses: *Organizational Behavior and Leadership* and *American Government*. In *Organizational Behavior and Leadership*, cadets learn fundamental leadership and management models and ideas.

In the *American Government* course cadets study the political process and the making of public policy, examine the framework of the U.S. democratic system, and explore topics on political parties, election processes, interest groups, and civil liberties as well as domestic and foreign policy including the policy making process and its consequences. Furthermore, cadets learn about *leading others* and understanding the working relationship with local, state and federal government agencies. During the junior year, cadets take *Morals and Ethics* and *Criminal Justice* courses. As seniors, they continue their study of law in *Maritime Law Enforcement* course. In the *Morals and Ethics* cadets examine a variety of philosophical models regarding actions that can be considered right or wrong. By analyzing ethical and moral standards cadets reinforce their self-decision-making abilities and develop their own moral voice. In *Criminal Justice* and *Maritime Law Enforcement*, they are required to study the U.S. civilian and military criminal justice system and the legal issues associated with the Coast Guard’s law enforcement mission in the maritime environment. In their senior year, while completing a capstone project, cadets are exposed to teamwork in research or project work where they practice leadership by managing group members, rotate chairmanship of weekly project meetings, complete deliverables, etc. that contribute to learning and understanding their best attributes of personal leadership style.

#### 2) Communication Effectiveness

Communication effectiveness relates to the communication of ideas through effective speaking and writing, and persuasive informative presentations. Writing, presentation, and speaking abilities are assessed annually in at least one assignment. During their first year, cadets across all majors are required to take two three-credit courses which include *English Composition and Speech* and *Writing about Literature*. In the English courses, cadets develop writing and speaking communication skills, as well as develop their critical thinking. Writing and oral communication skills are also reinforced throughout other courses across all majors. Throughout four years, cadets have several opportunities to participate in Academy-wide communication skills competitions where they present their written and oral work. The top candidates receive awards based on the quality of their work. By using specific assignments, academic faculty are required to assess both writing and speaking effectiveness, then re-evaluate through a holistic review process to ensure that cadets develop effective communication skills by the time they graduate. In particular, senior cadets are required to demonstrate proficiency in technical communication and writing by the time they complete and submit their senior projects as their final graduation requirement.

#### 3) Ability to Acquire, Integrate and Expand Knowledge

The continuing growth of non-traditional learning technologies and increasing information sources continue to

extend the places where learning and access to information occurs. As computer technology and information accessibility continue to improve, it is vital to tie the fundamental concepts of learning and communication to the development of Information Literacy (IL) skills. USCGA considers IL to be one of the most critical skills for cadets continued professional growth and lifelong learning. In response to the need of information literacy skills development, academy-wide initiatives have been infused across curricula to ensure that cadets become information fluent. Specifically, tailored information literacy program at USCGA benefits cadets by moving them from just basic information literacy skills to a

point, where they become information fluent. Becoming information fluent does not only make cadets more successful in their studies while in college, but it will also prepare them for their continued career and lifelong learning.

#### 4) Critical Thinking Ability

Critical thinking development process at USCGA is based on the Bloom's Taxonomy as illustrated in Figure 4 [29]. At various stages in their academic development, students are guided through the six levels of Bloom's cognitive learning from "knowledge" through "Evaluation."

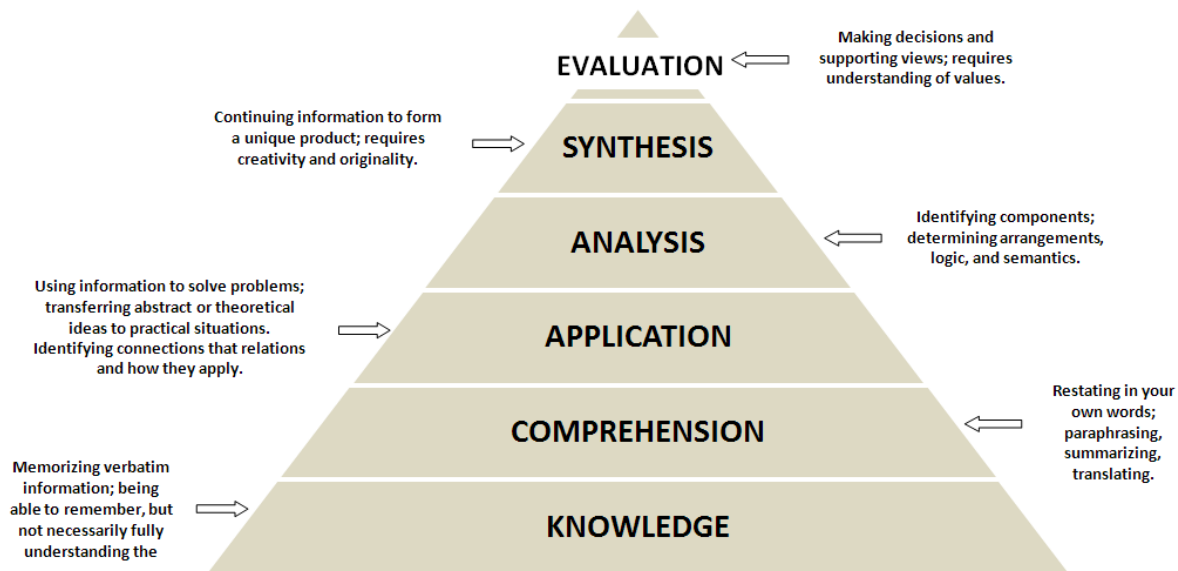


Figure 4. USCGA Critical thinking process based on Bloom's Taxonomy

Critical thinking is an important skill that students must develop in order to become effective learners. Teachers' ability to convey ideas effectively to students and develop critical thinking depends on their understanding of students' perspectives, experiences and connecting with students' prior knowledge. Creating frameworks or perspective for critical thinking takes time, patience, and the intentional design of classroom exercises and assignments that encourages students to practice critical thinking sequentially through the six levels of Bloom's taxonomy. At USCGA, students are encouraged to develop and practice critical thinking skills by exposing them to practical applications of concepts concurrently with the appropriate theory. This has been successfully accomplished with the use of project assignments, especially in engineering courses. Such exercises provide students with opportunities to think about and critically evaluate their own understanding and experiences.

For example, in one of the Civil Engineering courses, Geotechnical Engineering Design, students are required to complete six projects that build on each other in several modules. The course is structured such that part of the lessons are used to cover basic concepts and design principles, but most of the time is spent discussing and working on the projects either individually or in small groups. Details of the projects and the learning outcomes and Bloom's levels are presented in Table I. The projects are designed to lead students through several levels of Bloom's Taxonomy within the cognitive domain. In project 1, students are required to remember previous material learned in the prerequisite course and make the connection with the design process--this is mostly related to the knowledge level of Bloom's Taxonomy. By the completion of project six, students' cognitive learning is expected to have occurred at all six (knowledge, comprehension, application, analysis, synthesis and evaluation) levels of Bloom's Taxonomy.

TABLE I. LEARNING OUTCOMES FOR GEOTECHNICAL ENGINEERING DESIGN PROJECTS

Project Title	Learning Outcomes
Project 1: Subsurface Investigation	<ul style="list-style-type: none"> <li>• Critique on the quality and completeness of a geotechnical investigation.</li> <li>• Identify and/or determine suitable soil parameters required for design.</li> <li>• Familiarization with minimum standards for tests and boring (amount &amp; depth requirements)</li> <li>• Recommend possible foundation options based on soil properties (no foundation design required at this stage).</li> </ul> <p><i>Remembering previously learned materials in Soil Mechanics and making the connection to their relevance in the design process. Low level of critical thinking in evaluating adequacy and suitability of the geotechnical investigation for the proposed construction.</i></p>
Project 2: Construction Dewatering	<ul style="list-style-type: none"> <li>• Identify purpose of dewatering</li> <li>• Familiarization with construction dewatering methods.</li> <li>• Exposure to hydrogeology and ground water engineering.</li> <li>• Design of a dewatering system.</li> </ul> <p><i>Grasping the importance of dewatering and its role in construction safety. Apply knowledge to complete design process.</i></p>
Project 3: Bulkhead Design	<ul style="list-style-type: none"> <li>• Apply the theory of lateral stresses</li> <li>• Identify effect of soil profile and surface on lateral stresses.</li> <li>• Determine net loading on bulkhead due to active and passive lateral forces.</li> <li>• Design a steel sheet-pile bulk head including selection of suitable sheet-pile section to meet allowable stress requirements.</li> <li>• Design an anchor or tie back to meet stability requirements.</li> <li>• Familiarization with design codes.</li> </ul> <p><i>Higher level of critical thinking and application of knowledge to complete design process. Evaluation through making judgment based on constraints.</i></p>
Project 4: Retaining wall Design	<ul style="list-style-type: none"> <li>• Apply the theory of lateral stresses</li> <li>• Identify effect of soil profile and surface on lateral stresses.</li> <li>• Determine loading on wall due to active and passive lateral forces.</li> <li>• Design a reinforced concrete retaining wall to all stability requirements.</li> <li>• Determine the amount and size of reinforcement required.</li> <li>• Determine construction cost.</li> <li>• Apply ACI 318 reinforced concrete design code.</li> </ul> <p><i>Application, analysis and evaluation through making judgment on cause deterioration, choosing correct parameters to complete design, breaking down design problem into components.</i></p>
Project 5: Pile Foundation Design/Drilled Shaft Design	<ul style="list-style-type: none"> <li>• Identify soil design parameters.</li> <li>• Apply different static formulas to determine pile capacity.</li> <li>• Identify effect of soil profile &amp; properties on capacity.</li> <li>• Understand the importance of load tests.</li> <li>• Design single pile &amp; pile groups to meet vertical loading requirements.</li> <li>• Determine settlement of single pile &amp; pile group.</li> <li>• Familiarization with methods of constructing drilled shafts.</li> <li>• Design a drilled shaft.</li> </ul> <p><i>Application, analysis and evaluation through choosing correct parameters to complete design, breaking down design problem into components. Synthesis by comparing design options and writing a comprehensive report.</i></p>
Project 6: Design of Shallow Foundations	<ul style="list-style-type: none"> <li>• Select design parameter based on soil properties</li> <li>• Understand the practical importance of flexural principles and apply them.</li> <li>• Understand the interaction between soil and foundation.</li> <li>• Design a mat foundation.</li> <li>• Design an isolated footing.</li> <li>• Use design codes.</li> </ul> <p><i>All six levels of Bloom's Taxonomy in cognitive domain. High level of critical thinking, making the connection with practical applications of knowledge gained in other civil engineering courses. Development of some professional judgment.</i></p>

### 5) Military Training

“Honor, Respect, and Devotion to Duty” are very important core values mandated in the USCGA mission statement. Teaching of leadership principles within the cadet/officer training programs is reinforced through a combination of an interactive dialogue with their civilian and military instructors, and by the co-curricular teaching activities and personal example set by dedicated officers and faculty members. The Honor Code is enforced and administered through the Cadet Honor System and upper-class cadets are responsible for the on-going instruction of underclass in the principles and obligations of living under the Code. Senior cadets who serve

as Regimental Officers receive, investigate, and conduct Honor Council hearings of alleged violations of the Code by members of the Corps of Cadets.

USCGA developed and has been utilizing the *L.E.A.D. Program* for cadets’ leadership education and training. The L.E.A.D. strategy has been used for the last several years and has been continually assessed and revised to improve its effectiveness to produce competent CG leaders (COMDTINST 5351.1). The various components of this model are as follows:

- *L (Learn from theory)*: The “L” indicates that cadets *Learn from Theory*. Cadets are taught the foundational and

advanced models, as well as theories related to specific domains and their changing roles from 4/c cadets during freshman year to leaders as 1/c cadets during senior year.

- *E (Experience through practice)*: The next stage in this model, “E,” is that cadets also learn from *Experience through Practice*. From being a watch stander or member of the Regimental Staff, an athlete or captain, and a leader in a group project or any academic coursework, cadets are given opportunities every year to practice leadership skills and learn from their experiences.
- *A (Analyze using reflection)*: Cadets are also expected to learn how to *Analyze using reflection*. With the assistance of military and academic faculty or on their own and driven by their own initiatives, cadets develop various intellectual pursuits that allow them to analyze and reflect. They often write professional leadership papers in Cadet Leadership Journal entries and write leadership term papers in several academic courses. For example, in some of the assignments such as *Identity Papers*, *360 Feedback* and *Leadership Defense* papers cadets are required to reflect on opportunities that are designed to encourage self-development as leaders throughout all four years of education.
- *D (Deepen through mentoring)*: It is not until senior year that cadets can *deepen their experiences through mentoring* during which they are exposed for the first time to mentoring through the L.E.A.D Mentoring program. Mentoring from military staff, academic and athletic faculty provides cadets with leadership models which cadets take and apply through their experiences in the barracks, classroom, sports field or during any club activity. These frequent quality interactions are designed to provide cadets with guidance to be future officers and *leaders of character*.

During the summer, cadets have additional opportunities to apply their learning in CG operational during internships, summer assignments on ships and at CG units, or at USCGA while training incoming cadets. The competencies already developed are reinforced and applied including team building, communications, accountability, conflict management, and technical proficiency. It is important to understand the holistic approach to leadership development that each cadet is required to develop to grow into a competent Coast Guard leader. Over the 200-week experience, cadets go through numerous undertakings in academics, athletics and military to *learn* and *reflect* on theories, *experience* leadership and *reflect* upon their own leadership development and growth. As leader development requires personal interactions and practice, cadets are experiencing 200-weeks of leadership opportunities where they learn from failure and are expected to struggle to produce competency and full personal growth. Each year at the Academy provides a new and distinctive role within the Corps of Cadets.

#### 6) *Health and Physical Training*

CG officers are operationally ready when physical preparedness and strengthening standards are met accompanied by leading a healthy and fit lifestyle. The leadership program

assumes that all CG cadets can improve their health status because fitness levels are dependent on a sound exercise program. Health fitness enhances the individual’s capacity to handle the physical demands of the job, reduces the risk of injury and chronic disease, assists in weight management, and helps individuals pursue physically active and recreational activities. The responsibility for the physical-athletic development of the CG cadets’ rests primarily with the Director for Athletics and the Commandant of Cadets. Together they provide a range of activities that shape both the bodies and physical skills of cadets.

During four years at the Academy, cadets go through a set of training exercises, drills, physical fitness trainings and sport activities. To achieve high-levels of operational effectiveness and readiness, cadets are required to be physically fit and meet the standards of various physical fitness tests so that they are ready and able to perform their military duties. The USCGA Leadership development program considers physical fitness as a critical element of the mental discipline and moral strength that can be acquired through participation in competitive sports when teamwork and leadership are practiced and developed.

The cadets are required to develop expertise in a variety of sports and demonstrate tactical and technical competence by being able to explain and demonstrate athletic activities and know the best methods of preserving and performing them. Concepts such as fair play, teamwork, and sportsmanship are moral elements that result from the understanding core values of honor and respect. Physical fitness is a vital component of cadet life, and benefits cadets by instilling an appreciation for maintaining an active personal life-long fitness regime.

#### 7) *Community Service*

Participation in non-academic activities is part of the USCGA culture where cadets are required to fit these extracurricular activities into their busy schedule. To learn how to lead others, cadets are also encouraged to participate in approved social clubs and community service. Throughout these activities, cadets practice teamwork, goal setting, diversity appreciation, tolerance, conflict management and communication. The Academy recognizes the importance of community and service learning as they are vital for development and enhancement of cadets’ leadership skills. Through community work and service learning, cadets apply their academic skills and knowledge to address real-life needs in their communities and become enriched in ethnically and culturally diverse environments. Cadets are required to complete at least eight hours of community service each semester. This provide tremendous opportunities for cadets to engage with local communities and to explore practical ways of servicing others. By working and solving community problems, cadets go through concrete experience and active experimentation followed by reflection as they seek to achieve real objectives for the community and deeper understanding of their self-leadership style and other leadership skills.

Another important area of measurable service learning is achieved through cadets’ involvement in the social and residential life at USCGA. Cadets are exposed to self-leadership development and learning opportunities by living together, designing their own social interactions, and



collaborating socially and professionally regularly with faculty, staff, coaches, and administrators outside the classroom. They are also governed by a standard code for cadet conduct and academic integrity. The military, residential, and social environments are critical platforms of concrete experience and active experimentation that are designed to bring together talented, engaged, and energetic cadets with various leadership abilities, interests, racial, socioeconomic, and ethnic backgrounds to promote self-leadership and the Coast Guard's code of conduct. Furthermore, during the summer, cadets have additional opportunities to apply their learning in the operational CG or internships or are at the Academy's training incoming cadets.

#### 8) Clubs and Organizations

Cadets, as members of the Corps of Cadets, have opportunities to take active leadership roles in the running of daily life on campus and managing other cadets. Throughout the process, cadets rise to the challenge of experiencing, developing and practicing their leadership skills in the Coast Guard by training and mentoring other cadets, lead a student organization, active participation in sports, active in the community, organize and run activities for the cadets at the Academy. Sophomore cadets serve as mentors and tutors to the freshman, overseeing the new cadets' transition to military, college, and academy life. Juniors and seniors, in addition to leading the freshman and sophomores, play an active role in running the day-to-day operations of the Academy and the Corps of Cadets. By graduation, each cadet would have had several opportunities to serve in positions that involve leading other cadets thus developing and honing their competencies in this leadership development framework.

Cadets support self-governing organizations and clubs to promote and develop self-leadership training outside the academic classroom or military training. Faculty and staff serve as advisors, but these organizations are governed and managed by cadets. Faculty advisors ensure that cadets are motivated to promote the missions and activities of the organizations. Participation provides additional opportunities for cadets to practice "self-leadership" and "leading others" skills by taking responsibility of managing the organizations. With each progressive year, cadets shift their focus to the next set of leadership competencies, while still sharpening their skills in the previous categories.

### V. CONCLUSIONS

At the United States Coast Guard Academy, leadership is developed through the *LEAD model* and relies on integrating theory of leadership with practice and experiential learning through extra-curricular and service learning experiences that are supported by academic, military, athletic, community, and club activities. This model utilizes four elements: *Learn from Theory - academic experience (L)*, *Experience through Practice - non-academic experience (E)*, *Analyze Using Reflection - non-academic experience (A)*, and *Deepen through Mentoring - non-academic experience (D)*.

A distinctive component of this approach comes from the specific leadership competencies that are required to be developed in order to produce effective leaders. Those competencies are grouped into four major categories: *leading self*, *leading others*, *leading performance and change*, and *leading the Coast Guard*. This is a very unique approach as it promotes the development of leaders with strong *self-leadership* traits in addition to the typical leadership skills such as team building, communications, accountability, conflict management, information literacy, technical proficiency, etc. Once cadets acquire *self-leadership* skills, become responsible for their leadership actions, and are capable of *leading others* they are prepared to face leadership as commissioned officers.

USCGA's accomplishment in achieving leadership proficiency is also based on moral and ethical development that significantly enhances the honor advancement and climate in which intellectual, physical-athletic, and leadership development are reinforced. Mentoring other cadets, leading organizations, actively participating in sports, working with and within the community, organizing and running activities for the cadets are important practices and training activities that have been successful in the USCGA leadership skills development program.

Today's leadership programs must educate, train, and prepare their future leaders so that they will be capable to operate and lead their organizations in an environment that is increasingly more global, complex, and unpredictable. As support for shared and team-based leadership has been gradually evolving in other sectors of the economy, the USCGA leadership development framework serves as a model that supports effective leadership development at academic institutions.

### REFERENCES

- [1] E. H. Schein, *Organizational culture and leadership*, 2nd ed., San Francisco; CA, Jossey-Bass, 1992.
- [2] D. I. Jung, C. Chow and A. Wu, "The Role of Transformational leadership in enhancing organizational innovation: Hypotheses and some preliminary findings," *The Leadership Quarterly*, vol. 14, 2003, pp.525-544.
- [3] S. H. Schwartz, (1999). A theory of cultural values and some implications for work. *Applied Psychology: An International Review*, 48(1), 1999, pp. 23-47.
- [4] A. Tarabishy, G. Solomon, L. W. Fernald Jr and M. Sashkin, "The entrepreneurial leader's impact on the organization's performance in dynamic markets," *Journal of Private Equity*, vol. 8, No. 4, 2005, pp. 20-29.
- [5] P.G. Northouse, *Leadership: Theory and Practice*, 4th Edition, Sage Publications, London, 2005.
- [6] M. Dodgson, "Exploring new combinations in innovation and entrepreneurship: social networks, Schumpeter, and the case of Josiah Wedgwood (1730-1795)," *Industrial & Corporate Change*, vol. 20(4), 2011, pp. 1119-1151.
- [7] M. Kouzes, J. Posner and E. Biech, *A Coach's guide to developing exemplary leaders: Making the most of the leadership challenge and the leadership practices*. Inventory (LPI). Jossey-Bass, 2010.
- [8] F. E. Fiedler, Research on leadership selection and training: One view of the future, *Administrative Science Quarterly*, vol. 41(2), 1996, pp. 241-250.

- [9] C. W. Yang, "The relationships among leadership styles, entrepreneurial orientation, and business performance," *Managing Global Transitions*, vol. 6, 2008, pp. 257-275.
- [10] N. Papalexandris and E. Galanaki, "Leadership's impact on employee engagement," *Leadership & Organization Development Journal*, vol. 30(4), 2009, pp. 365-385.
- [11] J. M. Kouzes and B. Z. Posner, "Leadership begins with an inner journey," *Leader To Leader*, vol. 60, 2011, pp. 22-27.
- [12] M. Wheatley and D. Frieze, *Communities Daring to Live the Future Now*. Berrett-Koehler Publishers, 2011.
- [13] R. M. Stogdill and M. Bass, *Stogdill's handbook of leadership: A survey of theory and research*. New York: The Free Press, 1989.
- [14] J. D. Houghton and C. P. Neck, "The Revised self-leadership questionnaire: Testing a hierarchical factor structure for self-leadership," *Journal of Managerial Psychology*, vol. 17, 2001, pp. 672-691.
- [15] C. C. Manz and H. P. Sims, *The new super-leadership: Leading others to lead themselves*. San Francisco, CA: Berrett-Koehler, 2001.
- [16] P. Hawken, *Blessed Unrest: How the largest movement in the world came into being and why no one saw it coming*. New York, NY: Penguin Group, 2007.
- [17] C. P. Neck, "Thought self-leadership: A self-regulatory approach to overcoming resistance to organizational change," *International Journal of Organizational Analysis*, vol. 4, 1996, pp. 202-216.
- [18] R. E. Riggio, H. R. Riggio, C. Salinas and E. J. Cole, "The role of social and emotional communication skills in leader emergence and effectiveness," *Group Dynamics: Theory, Research, and Practice*, vol. 7(2), 2003, pp. 83-103.
- [19] L. Thayer, *Leadership/communication: A critical review and a modest proposal*. In G. M. Goldhaber & G. A. Barnett (Eds.), *Handbook of organizational communication*, Norwood, NJ: Ablex, 1988, pp. 231-263.
- [20] R. B. Kaiser, R. Hogan and S. B. Craig, "Leadership and the fate of organizations. *American Psychologist*," vol 63, 2008, pp. 96-110.
- [21] R. L. Taylor and W. E. Rosenbach, In *Pursuit of Excellence*, 5th Ed. Westview Press, 2005.
- [22] G.E. Prussia, J. S. Anderson and C. C. Manz, "Self-leadership and performance outcomes: The mediating influence of self-efficacy," *Journal of Organizational Behavior*, vol. 19, 1998, pp. 523-538.
- [23] R. Maellaro, "The learning journal bridge: From classroom concepts to leadership practices," *Journal of Leadership Education*, vol. 12(1), 2013, pp. 234 - 244.
- [24] L. Brown and B. Posner, "Exploring the relationship between learning and leadership," *Leadership and Organization Development Journal*, vol. 22, 2001, pp. 274-280.
- [25] S. W. Arendt and M. B. Gregoire, "Leadership behaviors in hospitality management students. *Journal of Hospitality & Tourism Education*, vol. 17, 2005, pp. 20-27.
- [26] D. V. Day, "Leadership development: A review in context," *Leadership Quarterly*, vol. 11(4), 2001, pp. 581-613.
- [27] M. Sowcik and S. A. Allen, "Getting down to business: a look at leadership education in business schools. *Journal of Leadership Education*, vol. 12(3), 2013, pp. 57-75.
- [28] United States Coast Guard Commandant Instruction 5351.1, 2016, p. 2.
- [29] B. S. Bloom, M. D. Engelhart, E. J. Furst, W. H. Hill and D. R. Krathwohl, D.R. *Taxonomy of educational objectives, handbook I: The cognitive domain*. New York: David McKay Co Inc, 1956.

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