FIRST LINE LEADERSHIP DEVELOPMENT:

ITS IMPACT ON ORGANIZATIONAL PERFORMANCE ABOARD U.S. NAVY SHIPS

by

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Abstract

The impact of leadership development programs on organizational performance is a relatively new area of research. Most of the research available has focused on senior leaders within an organization. This study investigates the first line leader. These leaders learn most of what they know through trial and error, observation of others, and feedback from superiors as they work their way up the organizational structure. Most have had little if any formal leadership development. Yet, these individuals have the most interaction, day in and day out, with most of the production capability in the organization. This paper investigates the premise that leadership development programs geared toward first line leaders can have an impact on the organizations performance.

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CHAPTER 1. INTRODUCTION

Introduction to the Problem

> *Everything starts and ends with leadership. Nothing else we accomplish, no other priority we pursue, is of much consequence if we do not have sound and effective leadership in place to enact it. We all have a responsibility to develop our own leadership potential and that of the Sailors in our charge. (Chief of Naval Operations (CNO) in CNO Guidance for 2006).*

The United States Navy invests in leadership development at many levels from junior enlisted to the most senior officers. In his position as Chief of Naval Operations and most senior officer in the Navy, Admiral Mike Mullen places a premium on leadership development. One of his three top priorities for 2006 was the development of 21st century leaders "through a transformed manpower, personnel, training and education organization that better competes for the talent our country produces and creates the conditions in which the full potential of every man and woman serving our Navy can be achieved" (Mullen, 2006a, p. 3).

The other two top priorities Admiral Mullen has articulated for the U.S. Navy is to (Mullen, 2006a, p. 3.):

1. Sustain combat readiness … with the right combat capabilities -- access, speed, agility, adaptability, persistence, awareness and lethality -- for the right cost.
2. Build a fleet for the future … balanced, rotational, forward deployed and surge capable of the proper size and mix of capabilities to empower our enduring and emerging partners, deter our adversaries and defeat our enemies.

These priorities on developing 21st century leaders, sustaining combat readiness and building the fleet for the future were reiterated in his guidance to the Navy in 2007 (Mullen, 2007). It takes people and leadership to achieve these priorities. In the Navy culture all service men and women are assessed through voluntary programs at an early

age. Enlisted servicemen initially enlist at age 18. Officers are initially commissioned at age 22, right out of college. The Navy promotes only from within its ranks based on experience, time in service, and skills. Development of the Navy's leaders, present and future, thus falls to the service. Leadership development in the United States Navy takes many forms. Formal leadership development occurs through courses at schools, computer courses online, and annual refresher courses. Informal leadership development occurs through mentoring, observation of supervisors and peers, informal discussions, and on the job experiences.

The goal of leadership development in the Navy is to not only improve the potential of every man and woman in the service but to maximize combat capability. Is leadership development in the Navy achieving this aim? Is servicemen potential improving as a result of leadership development? Is the combat capability of the Navy improving as a result of leadership development?

Background of the Study

Leaders are needed for change and innovation as the nature of warfare continues to change and evolve. "Our military is confronting a highly dynamic security environment far more complex, uncertain, and threatening than any we have faced before" (Mullen, 2006b, p.13). Rothwell & Kazanas (2000) maintain organizations must have programs in place to continually develop leaders in order to meet the challenges in a changing world.

Leadership skills are required of all U.S. Navy personnel. Feedback on leadership skills is provided to sailors during formal and informal counseling sessions. Enlisted

sailors are evaluated on the following supervisory and leadership skills (Hoewing, 2005, 18-13):

1. Growth and development of subordinates.
2. Personnel directly supervised.
3. Personnel supervised through subordinates.
4. Equipment and material for which responsible.
5. Size of budget managed.
6. Leadership activities and accomplishments. Include team and subordinate accomplishments that reflect your leadership.
7. Performances as instructor.
8. Counseling given.
9. Retention efforts and results.

These skills are expected to influence the performance of others as well as have a positive impact on the organization.

From the 1950's through the 1990's, scholars such as Edward Deming and Frederick Herzberg have researched the link between leaders/managers with employee performance. "The aim of leadership should be to improve the performance of man and machine, to improve quality, to increase output and simultaneously to bring pride of workmanship to people." (Deming, 1986, p. 248). Current research is demonstrating a linkage between leaders/managers and organizational performance, mostly through the activities of employees. Robert Behn, (2004, p. 7) from Harvard University's John F. Kennedy School of Government, maintains leaders can "mobilize the organization's resources to ratchet up performance in some tangible way". By creating a performance framework individuals are mobilized to improve the performance of their organization. According to Ulrich, Zenger, and Smallwood (1999), leaders can directly improve the organization's bottom line by investing in human capital, producing organization results by creating capabilities, delivering customer results, and building shareholder value. Whitney (2006), associate editor for Chief Learning Officer, notes that in a recent survey

of 20 top-performing organizations in the Fortune 500, 70 percent of the respondents link their leadership development efforts to business success.

Statement of the Problem

The United States Navy has committed to developing its leaders. Courses have been prescribed. There are week long courses specifically tailored to various experience levels in the Navy. Informal leadership development is mandated at the Command level on a periodic basis. And individual performance evaluations annotate an individual's proficiency in leadership along with documented mid-term counseling.

With all of the effort the U.S. Navy is placing in leadership and leadership development, is the training improving its leaders? Figure 1 depicts a notional representation of the many factors that contribute to an organizations performance from human performance, materials, equipment, culture, and leadership to name a few. Does leadership development have an impact on the organization's performance? Can specific attributed based leadership development improve organizational performance?

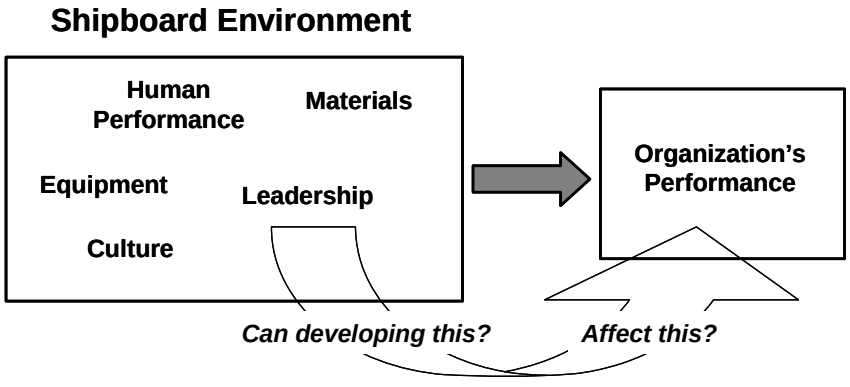

Figure 1. Factors in the shipboard environment that influence organizational performance.

Purpose of the Study

The purpose of this study is to assess leadership development programs for First Line Leaders (First Class Petty Officers) aboard a U.S. Navy ship and to determine if these programs improve the ship's organizational performance.

Significance of the Study

The importance of leadership development has been made clear by Navy policy. Consequently, the Navy invests significant money and time in leadership development. At the same time, organizational performance is important for the Navy in terms of husbanding resources and specific mission effectiveness. This study provides insight into the links between leadership development of U.S. Navy's First Line Leaders and the performance of the organization to which they are assigned.

The current mandated leadership development courses are a good beginning in training enlisted sailors on the theory and principles of leadership. However, the offered courses fall short of fully preparing First Class Petty Officers in the role of First Line Leaders. The existing schoolhouse courses are designed as an introduction to leadership in a military environment, definition of terms, teamwork, and counseling on a conceptual level (see Appendix A). Ulrich, Zenger & Smallwood (1999) maintain effective leaders must be able to provide results. The existing introductory courses fall short in translating theory into practice. The Navy never intended that these courses be the end all solution in developing effective leaders. In fact, the Navy has sponsored an ongoing revolution in training initiative to find ways to improve leadership skills. In a recent study conducted by Ninth House, knowledge and retention of situational leadership skills improved by 44 percent through the use of an online training program (Harris, 2005).

Definitions of Terms

Commanding Officer

The Commanding Officer is the senior most authority in charge of a unit. Commanding Officers of ships or aircraft squadrons are Commissioned Officers. They are chosen to command the unit by a selection board and are assigned command of a specific unit for a specific length of time (usually 18 to 24 months). The Commanding Officer "is charged with the absolute responsibility for the safety, well-being, and efficiency of his or her command" (Church, 2005, p. 3-1).

Executive Officer

The Executive Officer is the second in command of a Navy unit. "The Executive Officer shall be primarily responsible under the Commanding Officer for the organization, performance of duty, and good order and discipline of the entire command" (Church, 2005, p. 3-1).

Department Head

A Navy unit, ship or aircraft squadron, is divided into several departments. Each department is lead by a Department Head. The "Head of a Department (Department Head) of a command or other activity will be the officer detailed as such by competent authority. He/she will be the representative of the Commanding Officer in matters pertaining to the department. All persons assigned to the department will be subordinate to him/her and all orders issued by him/her will accordingly be obeyed by them" (Church, 2005, p. 3-144).

Division Officer

Each Department is divided into several Divisions. Each Division is normally lead by a junior officer normally with less than two years of Naval service. A Division Officer will "be responsible, under the head of the department, for the duties assigned to the division and for the conduct of subordinates, following regulations and orders of the Commanding Officer and other superiors" (Church, 2005, p.3-144).

Division Leading Chief Petty Officer

Each Division is also assigned a Division Leading Chief Petty Officer who assists the Division Officer. This individual is the most senior enlisted sailor in the division and has normally 10 to 20 years of experience in the Navy. The Division Leading Chief Petty Officer "will assist the division officer in administering, supervising, and training division personnel (Church, 2005, 3-152).

First Line Leaders or Leading Petty Officer (LPO)

The most fundamental unit within a U.S. Navy ship or aircraft squadron is the Work Center. Normally a Division will contain several Work Centers. The supervisor for this unit is the Leading Petty Officer or LPO. Aboard U.S. Navy ships, this individual is typically a First Class Petty Officer with the paygrade of E-6. They have a minimum of six years in the Navy, but typically have nine or more years of service. For the purposes of this study, the LPO will also be called the First Line Leader and the Work Center Supervisor. Literature uses these terms interchangeably. "The Work Center Supervisor will be the senior petty officer in charge of a maintenance group and will be responsible to the Department Head, via the Division Officer" (Church, 2005, 3-153). The

responsibilities of the work center supervisor are further described in detail below (Church, 2005, 3-153 to 3-155):

1. Be trained in the 3-M system.
2. Have a working knowledge of all provisions in Chapters 1, 2, and 3 of the 3-M Manual OPNAVINST 4790.4B.
3. Be thoroughly acquainted with all instructions pertaining to the 3-M system.
4. Screen and sign documents prepared by personnel in the work center following OPNAVINST 4790.4B.
5. Provide 3-M instruction for newly assigned personnel within the maintenance group.
6. Be aware of and disseminate to personnel in the work center all new developments in the 3-M system.
7. Ensure that personnel in the work center comply with requirements of the 3-M system and with applicable environmental protection laws and regulations.
8. Prepare the PMS weekly work center schedule.
9. Periodically inspect 3-M software and hardware for legibility and completeness.
10. Review Maintenance Requirements Cards (MRCs) and submit discrepancies by PMS Feedback Report (OPNAV 4790/7B) following OPNAVINST 4790.4B.
11. Screen all documents for accuracy and legibility prior to submission to the department 3-M assistant.
12. Advise the department head and division officer concerning inability to complete scheduled maintenance and any other problems involving 3-M operation.
13. Ensure that the status of work center maintenance is correctly reflected on the departmental maintenance control board.
14. Assign personnel to perform PMS actions and check that they are done following the MRCs.
15. Ensure that all corrective maintenance actions are properly documented.

16. Require all personnel assigned to the work center to:

(a) Be familiar with the weekly work center schedule, MRCs, Tag Guide Lists (TGL), Equipment Guide Lists (EGL), and other necessary documentation following OPNAVINST 4790.4B.

(b) Carry out assigned maintenance responsibilities under PMS.

(c) Document all corrective maintenance actions.

(d) Record completion of preventive maintenance actions on the weekly work center schedule.

(e) Record any discrepancy noted or identified as deferred maintenance requirement for future accomplishment.

(f) Inform the work center supervisor of inability to complete scheduled maintenance and any other problems in 3-M operation.

(g) Perform other duties assigned.

Peers

First Class Petty Officers form their own peer group. They are the most senior sailors whose uniforms consist of blue dungarees. They are sometimes called blue shirts. On larger ships they eat together in their own mess. They form a unique niche in the Navy by being the most senior blue shirts. Other more senior Chief Petty Officers and Commissioned Officers wear khaki uniforms.

Organizational Performance

There are many definitions of organizational performance. Chapter 2 will discuss organizational performance at length. For the purpose of this research, organizational performance is limited to how well the Work Center or Division performs within the context of their assigned tasking. Each Work Center or Division has specific responsibilities that contribute to the overall performance of the ship. The performance of ship is evaluated in the context of how well it is able to conduct its assigned combat

mission. Though the assigned tasking of each Work Center or Division is unique, there is a quantifiable performance that contributes to the overall mission of the ship and ship's ability to conduct its combat mission.

Subordinates

In the U.S. Navy in general, a subordinate to a First Class Petty Officer (who has a paygrade of E-6) is any other Navy Sailor with a paygrade of E-5 or less. For the purposes of this research, a subordinate is any other Petty Officer that works for the LPO.

Supervisors

In the survey, the supervisor to the LPO in the Work Center or Division is the Division's Chief Petty Officer or the Division Officer. The Chief Petty Officer is the senior enlisted sailor in the Division while the Division Officer is a commissioned officer of the rank of Ensign or Lieutenant Junior Grade (paygrade O-1 or O-2).

Research Hypotheses

This study will investigate the ability of the Navy's existing schoolhouse leadership development program and a tailored attribute based leadership development program in improving an organization's performance. The classical approach to hypothesis testing will be used in this study. "This approach represents an objective view of probability in which the decision making rests totally on the analysis of available sampling data. A hypothesis is established; it is rejected or fails to be rejected, based on the sample data collected" (Cooper & Schindler, 2003, p. 521). Eight hypotheses also called the alternative hypotheses will be addressed.

1. H_1 In the view of subordinates, leadership development in Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship.

2. H_2 In the view of subordinates, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship.

3. H_3 In the view of peers, leadership development at Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship.

4. H_4 In the view of peers, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship.

5. H_5 In the view of supervisors, leadership development at Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship.

6. H_6 In the view of supervisors, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship.

7. H_7 In the view of peers, the ship's attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship better than the Navy school house leadership development programs.

8. H_8 In the view of supervisors, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship better than the Navy school house leadership development programs.

In using the classical approach to hypothesis testing, the data collected is a sample of a larger population. Since the hypothesis is accepted or rejected based on the sample and the sample can be assumed to vary somewhat from the population, those differences must be determined to be statistically significant or insignificant. "Statistical testing provides the analyst only a chance to reject or fail to reject a hypothesis. In the classical tests of significance… the null hypothesis is used for testing" (Cooper & Schindler, 2003, p. 523). By testing to reject the null hypothesis which is the opposite logic of the alternative hypothesis, the analysis will either make the correct decision or make a type II error. Type II error is where one fails to reject a false null hypothesis. In hypothesis testing type II error is preferred over type I error. Type I error allows for one to reject a true null hypothesis. The following null hypotheses are proposed:

1. H_{1o} In the view of subordinates, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

2. H_{2o} In the view of subordinates, attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

3. H_{3o} In the view of peers, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

4. H_{4o} In the view of peers, attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

5. H_{5o} In the view of supervisors, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

6. H_{6o} In the view of supervisors, attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

7. H_{7o} In the view of peers, the ship's attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship better than the Navy school house leadership development programs.

8. H_{8o} In the view of supervisors, the ship's attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship better than the Navy school house leadership development programs.

Nature of the Study

Data was collected aboard a U.S. Navy ship on leadership development that First Class Petty Officers have received. Surveys were given to subordinates of the First Class Petty Officers, First Class Petty Officers and their peers, and supervisors of the First Class Petty Officers in the form of a 360 degree assessment. Two surveys were provided. The first survey included questions on the on the ability of First Class Petty Officers to improve the organization's performance after they had taken the Navy's formalized

leadership development curriculum offered at Navy schoolhouses but before they had taken the tailored attribute based development aboard ship. The second survey included questions on the ability of First Class Petty Officers to improve the organization's performance after they had taken the formalized schoolhouse based leadership development and the tailored attribute based development offered aboard ship. Using quantitative methods the research hypotheses was tested.

Assumptions

The following assumptions were made during this study:

1. Data collected during the surveys represent factual information. For example, the survey contains questions on an opinion about organizational performance of the Work Center or Division. This opinion is assumed to represent factual data about organizational performance.
2. Survey respondents within a cohort group (subordinate, peer, supervisor) all have the same level of familiarity on abilities and duties of the E-6 being evaluated. This assumption allows placing equal weight to survey responses within a cohort group.
3. Conclusions drawn from this study aboard one U.S. Navy ship can be inferred to represent other U.S. Navy ships.

Scope and Delimitations

This study encompasses a target population of 115 First Class Petty Officers aboard one U.S. Navy ship. All individuals were asked to complete a survey. Additionally, the subordinates and supervisors of these 115 First Class Petty Officers were also asked to complete surveys.

During the qualitative phase of this study participants were asked to provide their perspective on the effectiveness the 115 First Class Petty Officers have had on the organizational performance of the Work Center or Division to which they belong. The survey also asked if leadership development made any difference in the ability of the

First Class Petty Officer as a leader and if that development improved the organizational performance of the Work Center or Division to which they belong. During the quantitative phase of this study, the survey data was stratified from individual questionnaires to provide quantitative data. Information that is obtained through the survey that is not associated with leadership characteristics or attributes or information not associated with organizational performance of the Work Center or Division was not utilized during the quantitative phase.

Limitations

Study limitations are recognized as follows:

1. Since research subjects are all members of the U.S. Navy, generalizations derived from the results may only be applicable to similar organizations.
2. The target population is limited to a ship may not be applicable to Navy units that are not ships.
3. The target population is one specific paygrade, so conclusions derived from this study may not be applicable to other paygrades.
4. Treatment of the independent variable is constrained. One of the intervening variables is beyond the control of the researcher (was applied prior to the commencement of this study).

Organization of Remaining Chapters

Chapter 2, titled Literature Review, provides an in-depth review of specific literature pertaining to leadership development as it pertains to organizational performance. This chapter offers theoretical and research support for any linkages between leadership development programs and organizational performance. Several case studies are presented relating various leadership development programs to organizational performance. Chapter 3, titled Methodology, outlines the methodology that was employed during this study. Advantages and disadvantages of qualitative, quantitative

and mixed methods are reviewed as they pertain to the research in this study. A discussion on research design is presented as well as to why the methodology chosen for this study was selected. Information on data collection, as well as any analysis undertaken, was also included in Chapter 3. Chapter 4, titled Data Analysis and Results presents the data, analysis of the data as well as findings and results. A discussion on the selection of the data analysis methods is also presented. Chapter 5, titled Conclusions and Recommendations, presents a top level review of the major findings of this study as well as conclusions and recommendations for the U.S. Navy as well as recommendations for further study. The Appendices provide samples of the Focus Group Handout, Survey summaries from the focus group and the various cohort groups. An outline of the LPO Academy is also presented in the Appendix.

CHAPTER 2. LITERATURE REVIEW

Introduction

Leadership is one of the most observed and least understood phenomena on earth.

J. M. Burns (Zenger & Folkman, 2002, p. 1).

Chapter 2 entails a review of the literature focused on four areas; leadership, organizational performance, leadership development, and the relationship between leadership and organizational performance. While there is substantial literature on these four topics, there is not a significant amount of authoritative work that has been done determining the relationship between leadership development and organizational performance. Reviews of the training literature consistently conclude that there is a scarcity of meaningful research on how leadership can be identified and then developed, and the relationship between that leadership development and the organization's performance or effectiveness (Thomas, 2000, Bass, Avolio, Jung, & Berson, 2003).

Changes brought about by new legislation, changes in technology, and expectations by society at large have placed new demands on public-sector leaders to measure performance and to manage outcomes opportunities offer. External demands, whether from Congress, the administration, or the public, offer leaders important and powerful support for reforming agency culture and operations. To take full advantage of these opportunities, however, today's public-sector leaders need to possess many complex skills. They will need to know how to leverage technology; how to create and lead effective teams inside agencies and across agencies; how to manage to results; and how to take advantage of new methodologies such as activity-based costing, to achieve results (Gruenebaum, 1998).

The United States Navy has undergone its own transformation in the past twenty years as well. They have picked up many of businesses' best practices in an effort to streamline processes, increase organizational efficiencies, and place greater reliance on technology. The threat the Navy is defending against has shifted from a more predictable one against the Soviet Union to a highly varied threat from Nations and Non-National interests. Under this climate, how is the United States Navy conducting leadership development for enlisted personnel?

Defining Leadership

As stated by Yukl (2002, p. 6) "Management and leadership both involve deciding what needs to be done, creating networks of relationships to do it, and trying to assure it happens." Managers, especially front-line managers, have an important role to play in the success of any organization. Without any leadership ability, managers would not be successful in motivating their team to complete a task. Naturally, not completing the task at the front-line will cause a chain of events, which will have an effect on the overall organization's performance.

Olmstead (2000, p. 10) states "Leadership is defined as the process of influencing the actions of individuals, groups, and organizations in order to obtain desired results." Influencing people not only takes place at the middle and upper management positions but also at the front-line level. In most organizations, the front-line level is where the bulk of the work is done. Executives can develop a vision and mission, and have middle managers pass the message on to the front-line managers and workers, but it is the workers who will decide if they are motivated to achieve the vision and mission of the organization. Since front-line managers have the majority of contact with employees, it

will be the responsibility of those front-line managers to motivate and influence the employees towards the mission.

Stephen Covey (1991) suggests there are four levels of principle-centered leadership. The first is personal, one's relationship with oneself. One must have trustworthiness at the personal level. Second is interpersonal, one's relationship and interaction with others. Trust is the root of success or failure in relationships. Trust forms the bottom line for business, education and government. The third level of principle-centered leadership is based on managerial skills. Effective managers embody empowerment. Last are organizational skills. Within the organization, alignment becomes essential. Each level is necessary but is insufficient in isolation. It takes all levels together to form the basis of a principle-centered leader.

John Maxwell is a well known author on leadership. Maxwell (1999) maintains there are 21 indispensable qualities of a leader. These include: character, charisma, commitment, communication, competence, courage, discernment, focus, generosity, initiative, listening, passion, positive attitude, problem solving, relationships, responsibility, security, self-discipline, servanthood, teachability, and vision. He believes an individual can develop and refine these personal characteristics needed to be a truly effective leader.

Zenger and Folkman (2002) explain leadership in terms of a tent held up with five poles representing five behaviors. The pole in the center is character. Each corner is represented by interpersonal skills, focus on results, personal capability, and leading organizational change. These behaviors can be practiced and developed by an individual as well as reinforced by an organization.

The characteristics of great leaders are the subject of many books as the small sample above depicts. Ulrich, Zenger, & Smallwood (1999) maintain it is not enough to gauge leaders by personal traits. Effective leaders must know how to connect their leadership attributes with results. “Behavior-based attribute models are more effective than theory-based models” (Ulrich, Zenger, & Smallwood, 1999, p. 16). They maintain a leader’s job requires more than attributes such as character, knowledge and action. A leader’s job demands results.

In summary, leadership is many things. It represents different styles, different characteristics or attributes, and different skills. Effective leaders know they need to produce results for the organization. An effective leader knows which results are important to the organization. And an effective leader knows how to motivate their subordinates in producing those results.

Defining Organizational Performance

One of the most persistent themes in business has been finding solutions to improving organizational performance. According to Hofrichter & McGovern (2001, p. 35) “The end is performance. The goal is always improving organizational performance…”). Performance is defined through measurement of desired output. Performance is quantified though the value of that output. In their total performance solution model, “values, purpose, goals, rewards, competencies and leadership development” (2001, p. 36) all are individual parts of the performance system.

Various theories have been in vogue over the years touting the key to unlocking the mystery on why some companies performed better than others. Strategic planning, quality in workmanship, cultural climate, and putting people first, were just a few of the

theories that gained popularity over the years. Incorporating strategic planning into the corporate philosophy was viewed to be important in setting a direction, for the company to know where it was headed. This theory floundered in many companies in the implantation phase of the vision. Quality appeared to be the panacea for a time. The Japanese auto manufacturing industry cited as an example for overtaking U.S. dominance. While the view toward quality made important contributions toward organizational performance it ultimately fell short of desired improvement expectations to the company's bottom line. Institutional cultural changes soon followed with the view that a healthy culture of the employees would lead to better performance of individuals resulting in an improved corporate bottom line. By the 1990s, during the boom of the dot.com companies, putting people first became the catch phrase that received strong endorsements from human resources departments. Identifying what the institutions' culture was, proved too nebulous and elusive for most companies. Additionally, many companies found that the ability to change a corporation's culture cost to much, took to long to change, and yielded negligible results to the bottom line.

Research has born out several factors that contribute to performance within an organization. Hofrichter & McGovern (2001, p. 35) have summarized the following:

1. Performance is driven from the top down, not from the bottom up. Where you see high performance, you can deduce the presence of strong, focused leadership; without it, superior performance is not sustainable.

2. Performance is the product of winning behavior. When leaders and employees consistently do the things that enable an organization to "win"-to compete successfully in its field of endeavor-high performance is the outcome.

3. Winning behavior can be very effectively modeled by competencies.

4. Performance is always about achieving specific, measurable goals that help the organization win. Performance does not occur in a vacuum; part of its definition is the specific, targeted, meaningful accomplishment.

5. Performance is defined by measurement. Unmonitored, unquantified, standardless performance is a contradiction in terms.

6. Performance is shaped by the promise of rewards (and the fear of punishment).

While Hofrichter & McGovern's list is not a comprehensive list on all factors that affect an organization's performance, it does serve to demonstrate that performance is too complex an issue to be subjected to any one singular formula. The high-performance organizations are capable of great things because meeting the purposes and needs of the corporation are aligned with the whole body that supports them.

"There is a substantial body of research evidence regarding the importance of leadership development to organizational success" (Tubbs & Schulz, 2006, p.29). Drotter and Charan (2001), Fullmer and Goldsmith (2000), McCall and Hollenbeck (2007), Viceri and Fulmer (1997), and Whetton and Cameron (2005) have all conducted research into the relationship between leadership development and organizational performance. It is clear from the literature, factors that affect organizational performance are numerous and complex. Figure 2 depicts a systems perspective of organizational performance relating people, materials and technology in an environment with human and performance based outcomes (Whitemountain, 2005). Leaders and their skills interact within this environment influencing people and their working relationships to the techniques and methods in which tools are employed. Therefore to look at leadership development, one must consider the system in which the leader operates.

Performance Metrics

Performance metrics can mean different things to different layers of management within an organization. At the corporate level, performance metrics reflect the ability of

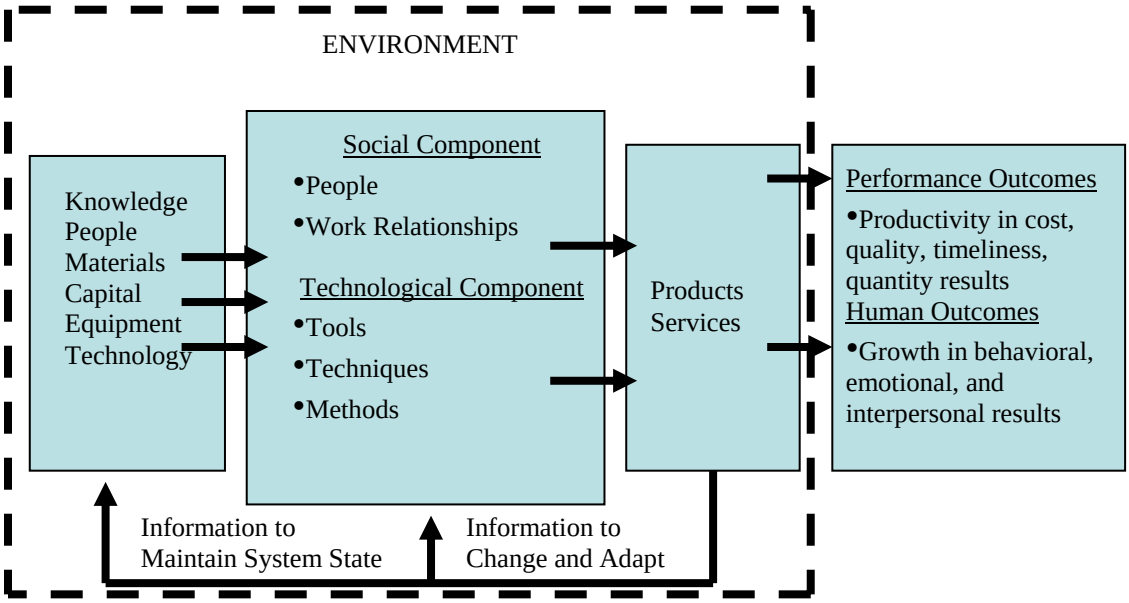

Figure 2. Systems perspective of organizational performance.

Note. From "Systems perspective of organizational performance," by S. A. Whitemountain, (2005).

the organization meeting its objectives. This may include items such as customer satisfaction, delivery times, and cost structure for customer service. At the individual ship level, performance metrics may take on a different perspective. For example, sailing times and fuel consumption are important to the ship's Master because they may factor in to the corporate metrics of customer satisfaction and cost of delivery. At the corporate level, cost is usually averaged out over voyage length and quantity shipped. At the ship's Master level, weather can cause delays in shipping and changing currents and speeds can influence fuel consumption. A ship's Master may be concerned about any damage caused to their cargo. At the corporate level, cargo damage can influence customer satisfaction and profit margin. While the specific performance metrics may be different, there is a

clear relationship between meeting individual ship objectives and the corporation's objectives.

Similar distinctions can be made about the U.S. Navy at the headquarters (corporate) level and at the individual unit level. Admiral Clark points to specific indicators when he discusses the health of the service (Clark, 2004). Retention statistics among sailors is important in an institution that promotes only from within. Today's recruits are tomorrow's leaders. The average age of equipment also becomes an important metric in deciding how much money is needed both for repair and upkeep as well as modernization. Like the private sector, the Captain of a U.S. Navy warship may track other metrics they believe are relevant in the management of their organization. Some of these, like retention within the local command, share commonality with the same metrics important at the headquarters level. Other metrics, such as food service excellence, may be more relevant at the individual unit level as it affects morale and perhaps retention.

U.S. Navy Performance Metrics

Much like the for-profit private sector, performance metrics in the U.S. Navy can fall into two categories. First there are headquarters level performance metrics that are important to senior leadership such as the Chief of Naval Operations. Second, there are performance metrics important to individual commands. Sometimes performance metrics are the same at both levels such as retaining quality workers. Other times, performance metrics may be different but support the headquarters vision. An example of this would be recruiting. Commands setting goals for individual recruiters may not be important to a ship command, however, the new recruits support the Navy in general with manpower.

The Chief of Naval Operations (CNO) much like the Chief Executive Officer of a large corporation plays a fundamental role in the vision and objectives of the organization. In the CNO's Guidance for 2004, Admiral Clark outlined what objectives and metrics he set as goals in his guidance for leaders. Under his manpower goals he set the following objectives (Clark, 2004, p. 6-7):

1. Develop a human resource strategy and force shaping plan to support the Sea Power 21 Navy. (CNP)

2. Establish reenlistment goals for 2004 of 56% (Zone A), 70% (Zone B), and 85% (Zone C). (All)

3. Reduce attrition by 10% from FY03 levels. (All)

4. Attain percentage of recruits with High School Graduate diplomas at 95% and develop accession metrics that will improve predictability of a prospective recruit's ability to succeed in the Navy. (CNP, CNRC)

5. Increase percentage of new recruits with college experience by 20% over FY03. (CNP, CNRC)

6. Raise the percentage of Test Score Category I-IIIA recruits (those recruits in the top 50th percentile of those taking the AFQT) accessing to RTC in FY04 to 67%. (CNP)

7. Support and execute the diversity strategic framework. (CNP)

   a. Realign and improve the Diversity organization.

   b. Develop a senior management diversity forum to monitor, guide and support the implementation of the strategic diversity effort.

   c. Increase females in enlisted technical ratings by 2% annually.

8. Establish TFMMS as the authorized manpower baseline for both civilian and military personnel. (CNP)

9. Implement the National Security Personnel System (NSPS) in the Department of the Navy. (CNP)

In 2005, Adm Clark reported the following achievements in meeting his 2004 goals (Clark, 2005, p. 2-3):

1. Recruited our Nation's Best. We have increased the percentage of new recruits with college experience by 60% over FY03, while raising the percentage of recruits in the top 50th percentile of those taking the AFQT to 70%. We realigned and improved our diversity organization by establishing a Diversity Directorate within OPNAV N1 to oversee all diversity/equal opportunity issues. We also established a Diversity Senior Advisory Group to chart the way ahead for our diversity efforts.

2. Strengthened the Total Force. We enhanced integration of the Total Force with initiatives aimed at active, reserve, and civilian components of the Navy. Development of career templates for our civilian workforce continued, and the use of workforce surveys tailored to 21 individual communities are helping to redefine how we accomplish our missions.

3. Exceeded Retention Goals. Retention numbers remain strong as we exceeded goals in Zone A by 5 percent (61%), Zone B by 6.6 percent (76.6%), and Zone C by 2 percent (87%). We also updated attrition and retention methodologies to better analyze unplanned losses, while developing accession metrics to improve the predictability of a recruit's ability to succeed in the Navy.

4. Better Aligned Personnel, Ratings, and Skill Sets. We continued the Perform-to-Serve program to align our personnel inventory and skill sets, and to instill competition in the retention process. More than 4,000 Sailors have been steered to undermanned ratings, and more than 42,000 have been approved for in-rate reenlistment since the program began.

5. Created an Environment for Personal and Professional Success. Leaders throughout our Navy attacked the number one cause for attrition: illegal drug use. Overall losses due to illegal drug use are down 5.9 percent from last year. We increased testing by nine percent Navy-wide, yet reduced the number of positive samples by 20 percent since FY03. While these numbers are promising, leaders must make every effort to ensure testing is conducted in the most effective manner. We also continue to maintain a zero tolerance for sexual harassment and racial discrimination.

6. Broadened Career Choices and Incentives. Assignment Incentive Pay enhanced combat readiness by permitting market forces to efficiently distribute Sailors where they were most needed. Through 31 JASS cycles, we had 9,281 applications and 2,773 selections for duty around the world.

7. Piloted Innovative Personnel Employment Initiatives. We are challenging all assumptions when it comes to determining manning strategies. The Fleet is implementing best practices from last year's Optimal Manning experiments to find the right mix of talent for pilot programs in USS NIMITZ and Carrier Air Wing ELEVEN. We've begun a new pilot program in USS DECATUR designed to allow Chief Petty Officers to fill the majority of Division Officer

> billets. And we are continuing our Sea Swap experiments with USS GONZALES, LABOON, and STOUT crews, even as we examine results from previous DD/DDG experiments to determine this concept's applicability to other ship classes.

In addition to and in support of the CNO's metrics, individual commands have metrics that are tailored to their type of organization. The following are examples of metrics used by ships in the fleet in measuring organizational performance: Maritime Warfare Excellence Award, Engineering Excellence Award, Command, Control, Communications and Information Warfare Excellence Award, Logistics Management Excellence Award, and the Type Commander Ship Safety Excellence Award (LaFleur, 2004). The Admiral who is responsible for equipping all U.S. Navy ships and training the crews is called the type commander. The type commander has set up unit competitions where ships that meet certain standards are entitled to display efficiency awards painted on the side of the bridge wing each year. Ships also compete against each other to be recognized as the best ship in their class in an award that is called the Battle Efficiency Award (LaFleur, 2004). These awards are designed to measure performance against a standard on skills that would be important in combat. One example would be identifying and shooting down enemy aircraft and missiles in a certain time.

Leadership Development

Mitchell and Poutiantine (2002) conclude leadership development is a necessity in a world that is more increasingly complex. They note (p.179):

> The question, "can leadership be taught?" has been debated for many years (Bennis & Goldsmith, 1997; Gardner, 1990; Wren, 1995). However, if one is to look at the proliferation of leadership training and development programs over the last couple of decades (Rost, 1993) one can conclude that the question is less controversial than the ongoing debate would indicate. The debate has shifted from the somewhat clichéd question of "are leaders born or made?" to the more practical question of "what is the best way to train leaders?" (Komives, Lucas, & McMahon, 1998).

One such path in developing leaders is through an experiential education process that includes a purposeful inquiry emphasizing “doing, observing, thinking, and reflecting” (Mitchell & Poutiantine, 2002, 180). The experiential education process incorporates individual as well as environmental elements. This holistic approach to learning has direct application in leadership development programs according to Mitchell & Poutianine (2002).

The U.S. Army has also had an interest in leadership throughout its history. The mission of the U.S. Military Academy at West Point is: "To educate, train, and inspire the Corps of Cadets so that each graduate is a commissioned leader … as an officer in the United States Army" (USMA West Point, n.d.). Craig, (1999) introduced a leadership development framework (LDF) founded in adult learning theory that consists of three pillars. These pillars, institutional training and education, operational assignments, and self development form a multi-dimensional aspect of leadership development. “During institutional training, leaders learn leadership theory and doctrine” (Craig, 1999, p.7). However, the key to leadership development is placing them in an environment where they can apply the skills they have been taught, learn from others through example, and broaden their knowledge. Craig’s (1999) view of self development, the third pillar, goes beyond institutional training and on the job application to stretch and broaden oneself.

Rather than focusing on the skills needed for a specific leadership level most companies focus on the economic requirements of the job. Consequently, instead of development an effective business strategy, managers spend most of their time acquiring new customers. Drotter & Charan (2001, p. 27) have outlined eight benefits a strong leadership development program can bring to an organization:

1. By establishing appropriate requirements for leadership levels, companies can greatly facilitate succession planning, and leadership development and selection processes in their organizations.

2. Individual managers can clearly see the gap between their current performance and the desired performance. They can also see gaps in their training and experience, and where they may have skipped a passage (or parts of a passage) and how that's hurting their performance.

3. Human resources can make development decisions based on where people fall short in skills, time application and work values, rather than rely on generalized training and development programs.

4. An individual's readiness for a move to the next leadership level can be evaluated objectively rather than tied to how well they performed in their previous position.

5. Leadership passages provide companies with a way to improve selection. Rather than basing their selection decisions on past performance alone, personal connections or preferences, managers can be held to a higher, more effective standard. Organizations can select someone to make a leadership turn when an individual is demonstrating some of the skills required at the next level.

6. A defined leadership development program provides organizations with a diagnostic tool that helps them identify mismatches between individuals' capabilities and their leadership level. Therefore, remedying the situation or, if necessary, removing the mismatched person, which is more likely

7. Leadership development programs help organizations move people through leadership passages at the right speed. People who ticket-punch their way through jobs don't absorb the necessary work values and skills. A development program provides a system for identifying when someone is ready to move to the next leadership level.

8. Leadership development reduces the time needed to prepare an individual for the top leadership position in a large corporation. Having an in house program allows organizations to create their own top-level leaders without the need to bring in outsiders.

Leadership development helps all levels of the company. By moving people upward only when they have mastered the assigned level greatly increases their chances of success. Clearly defining the new requirements enables them to help themselves and help their organization. "Apparently, the treatment supervisors experience trickles down

to their subordinates, influencing their fairness perception and their willingness to perform actions that contribute to organization effectiveness (performance)" (Taylor & Tepper, 2003, p. 30).

The Need for Leadership Development

A First Line Leader will have an impact on the performance of the whole organization, as Frunzi & Savini (1997, p. 152) explain, "Supervisors are the ventriloquists of the organization. They represent the image of the culture, personality, and philosophy of the company - the mouthpiece of the organization. Employees frequently judge the organization based on supervisory practices. Supervisors must make sure that the judgments are clear and correct." Normally, employees have more direct contact with First Line Leaders on a day-to-day basis than any other level of supervisor in an organization. For this reason it is paramount for First Line Leaders to have leadership skills to be effective.

If a worker moves into a First Line Leader's position and is never given any training in personal leadership skills, then how would that manager have the ability or knowledge to understand the needs of each of his or her employees? "First-level supervisors do indeed need training. They have the least education of all management personnel, they have come up through the ranks and accordingly lack knowledge of management, and they work most directly with employees" (Calhoon & Jerdee, 1975, p. 196). As stated by Ramesy (2002, p. 7): "To succeed as a supervisor, you still have to possess people know-how, including communication, motivation, decision-making, time management, and political skills."

Once First Line Leaders have been trained in the required leadership skills, they must then be able to move the theory of leadership into practice. Leadership skills can not be applied the same way in all situations. The leader must be aware of his or her surroundings and what leadership skills to apply. This type of leadership is classified as situational leadership (Hersey & Blanchard, 1982). Situational leadership is described as matching leadership behavior to the situation at hand. It is the balance of task and relationship. Task involves giving direction to employees, what to do, and following up with corrective action. Relationship behaviors involve understanding people, giving support, positive feedback and involvement in decision-making (Mosley, Megginson, Pietri, 2001, p. 252).

As discussed by Ulrich, Zenger, & Smallwood (1999) in Chapter 2, behavior-based attribute models are more effective than theory based models in developing good leaders. But it is not enough to simply develop attributes. Leaders must also know how to produce results.

The U.S. Navy views increased competitive advantage in terms of lower operating costs and greater combat readiness of equipment and crews. Pringle and Kroll (1997) maintain the Battle of Trifalgar was won before the first shot was ever fired due to the British fleet having a competitive advantage over the French. During the Battle of Trifalgar, Admiral Nelson could hardly have relied on his sailors to do the right thing at the right time had they not been well-trained. There is no time during a battle to refer decisions up the hierarchy. Those individuals who are on the scene must make instantaneous choices. Their success depends on their training, experience, and familiarity with the organization's mission, goals, and culture. Just as the Admiralty

trusted Nelson to rely on his individual initiative to develop and execute his plans, so Nelson relied on his subordinates' initiative and judgment. Today, the lesson of well equipped and trained sailors is every bit as important during combat when incoming missiles travel 20 miles a minute and reaction times are measured in seconds.

Impact of Leadership to Organizational Performance

Euripides perhaps provided the most important reason to have good leadership from a military perspective, “Ten good soldiers wisely led will beat a hundred without a head” (Fitton, 1994, p. 149). Leadership is the foundation to organizational viability and competitiveness (Martineau, 2004). Buckland's managing director Peter Chiswell explains: “You can manage inanimate objects, such as coal or steel, but you cannot just manage people. People must have leadership rather than management, and leadership requires warm relationships through which leaders can inspire their teams with confidence and the shared determination to achieve success in a common purpose or mission. Planning is vital to the success of every plan or mission. Ensuring success at the first attempt is not only vital but is often easier said than done” (Robson, 1995, p. 32). With the tightness of today's economy, for-profit organizations are particularly concerned about whether their investments in leadership development achieve desired outcomes (Altman, Keley-Radford, Reinelt, & Meehan 2004). Also, nonprofit organizations and foundations face a number of challenges in evaluating leadership development. A methodical use of evaluations and using those evaluation findings across program experiences are two of those challenges that stand out. Therefore, when organizations expend significant resources on leadership development, it is absolutely critical to assess the impact of those programs and to learn what's working and what isn't. Conducting a

high-quality evaluation, though, is a challenge. Leadership is a complex activity, and organizational efforts to improve it take many forms. But if the evaluation is set up and executed properly, it will not only improve development efforts, and thereby the quality of leadership, but also contribute to the performance of the organization. The evaluation of leadership development is itself an important leadership activity. Martineau (2004) recommends the evaluation of leadership development programs be conducted through 5 steps; identifying key stakeholders, performing a needs assessment, designing the evaluation, implementing it, and communicating it.

Bass, Avolio, Jung, & Berson (2003) collected data on 72 Army platoons lead by a platoon sergeant (a non-commissioned officer) and platoon leader (a commissioned officer) and found leadership attributes could be accurate predictors of the organization's operational performance. A dissertation by Thomas (2000) studied the relationship between leadership and organizational performance among High School Coaches and found through six case studies that all of the coaches shared the view that leadership had an affect on the performance of the team through number of wins and test scores on exams.

Timothy Drake (2003) presented in his dissertation the impact of leadership development on senior pastors' effectiveness (performance). The data analysis in the study indicated no significant relationship existed between the amount of leadership development through denominational and public seminars and the church's attendance and income. However, the data did indicate a positive relationship between the church's budget for pastoral development and attendance and income. Also, data showed a

correlation between pastors attending higher education classes and income performance of the church.

In today's marketplace, companies jostle to achieve a competitive advantage. Private institutions see enhanced competitive advantage in lower operating costs, leveraged technology, and human capitol as a mechanism to increase revenue (Porter, 1980). According to Jackson, Hitt & DiNisi (2003), it has been the leadership development investment in a company's human capital that has contributed to its competitive advantage more than any other factor. As Kouzes & Posner (1995, p. 321) state, "other studies reveal that leadership can account for improved performance as measured by a variety of factors: net income; sales, profits, and net assets; employee commitment, job satisfaction, and role clarity; and employee turnover, achievement of company goals, and teamwork."

One research study quantified the impact of specific leadership development activities in terms of its contribution to the bottom line. A four-year study, published in 2001, assessed the business outcomes of executive coaching for a sample of 100 executives. The coaching programs ranged from 6 to 12 months in duration, and the coaches had at least 20 years of experience as organizational development practitioners. The coaching programs studied fell into two categories: (1) change-oriented coaching, to refocus a participant's skills, and (2) growth-oriented coaching, to accelerate the learning curve for high-potential executives. This study found that coaching had significant tangible and intangible impacts on business performance, including productivity, quality, organizational strength, and customer service. The study also estimated the return on investment (ROI) of coaching in the sample studied. Forty-three percent of the executives

in the study provided an estimate of ROI in dollars. When calculated conservatively, ROI averaged nearly $100,000 or 5.7 times the initial investment in coaching (McGovern, 2001).

Systematic quantitative research also demonstrates that leadership can influence organizational performance. For example, Jeffrey Pfeffer and Alison Davis Blake, studied all National Basketball Association teams over a four-year period. They found that simply changing coaches didn't affect the team's performance as much as bringing in a new coach that had prior professional coaching experience or a strong historical win-loss record or a track record of improving past teams (Pfeffer & Sutton, 2006).

One study from Ninth House summarizes the relationship between leadership development programs and organizational performance. Their study found a correlation between top-performing organizations with leadership development programs and those companies that did not have leadership development programs. Ninth House used financial data to identify 20 top-performing organizations in the Fortune 500 and conducted interviews with those companies to uncover how their approach to leadership development sets them apart from their competitors. According to CEO Jeff Snipes (Whitney, 2006, p.1)

> There seems to be a clear linkage between organizations that follow leadership development best practices and long-term financial return. If you look at the financial performance of these top-performing organizations, they consistently outperform their competition. Over a period of five years their total shareholder return was greater than their competitors' in the same industry, and these organizations in general had a higher level of commitment and executive involvement and participation in their programs than the other organizations did.

Leadership Development for Enlisted Sailors in the U.S. Navy

The United States Navy currently is an all-volunteer force. Sailors may enlist in the Navy for a period of two to six years. For enlisted sailors, at the end of their service contract they can negotiate "reenlisting" for additional service. Promotions, seniority, and job assignments usually carry over from one enlistment to the other seamlessly. Enlisted ranks comprise nine different paygrades from E1 to E9. There are requirements for every paygrade that includes course material, time in that paygrade, and observed performance evaluations recommending that sailor for advancement.

Enlisted leadership development is a high priority for the Chief of Naval Operations and other top leaders in the Navy (Center for Naval Leadership c, 2004). The Navy Personnel Development Command (NPDC) was charged with supporting, integrating and standardizing the training development and delivery for all Navy Sailors (NPDC, 2004) conducted at fourteen different learning centers. The Center for Naval Leadership developed several initiatives designed to enhance leadership development for the Navy. Through the use of in-house course material and interactive computer based courses, a multi vector approach to leadership development is being tested.

The Navy's latest approach to leadership development attempts to address some of the shortcomings of past programs by taking a more holistic view to individual training and development. In addition to the traditional leadership material that is presented, information is presented and emphasized through workshops on organizational performance metrics, certification and qualifications programs in addition to personal and professional development material. Figure 3 summarizes the Five Vector Human

Performance Model that lays the foundation for NPDC's strategy on personnel training and development (Navy Knowledge Online, 2003).

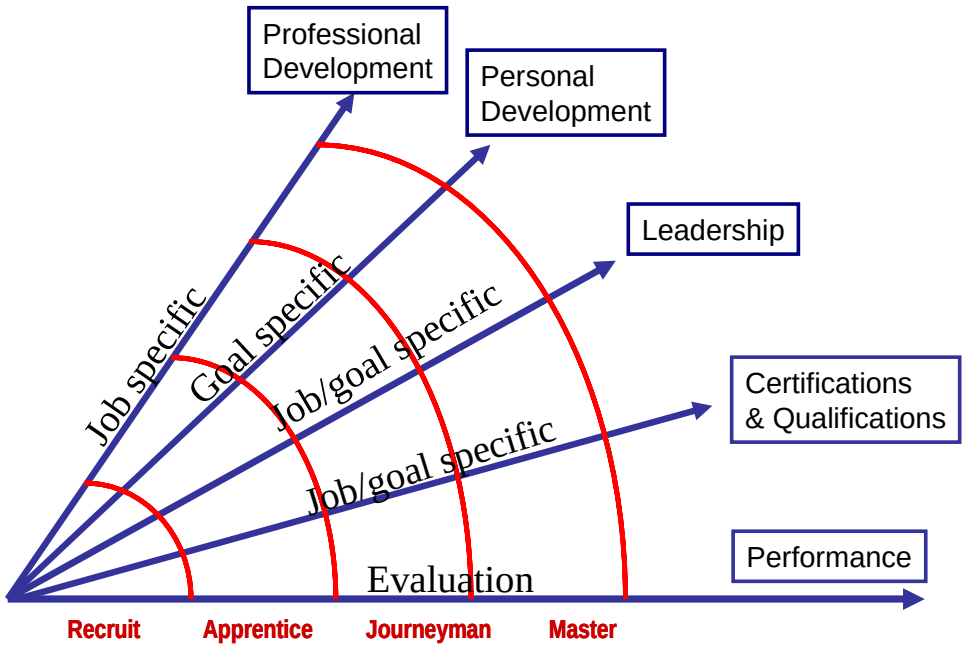

Figure 3. Five vector human performance model.

Note. From "Training Revolution Metrics," Navy Knowledge Online, 2003.

Leadership development occurs in a variety of formats for enlisted sailors in the U.S. Navy. Formal development occurs via courses at schoolhouses. Formal development can also occur in the workplace conducted by sailors within the organization. Informal development occurs by watching one's supervisors and by mentoring programs at unit commands that are designed to pass along best practices that include leadership skills.

There are currently three formal leadership development courses that are required before a sailor can be promoted to the senior leadership ranks of Chief Petty Officer. The first course is required upon promotion to the paygrade of E-4. The second course is

completed within one to two years of the first course while the sailor is in paygrade E-5. The final course is completed a year to two after the second course when the sailor is in paygrade E-6.

First Line Leadership Development Program

Promotion to the paygrade of E-4 marks a significant right of passage during a young sailor's career. Usually a sailor is in their first enlistment in the service with 3-4 years of service. Provided they joined the Navy at age 18, they are typically 21 to 22 years of age. Along with the shoulder insignia of an eagle (often called the crow) there is a chevron marking the rank of Petty Officer Third Class. This is "the first leadership position in the Chain of Command responsible for the growth, development, and daily direction of subordinates" (Center for Naval Leadership a, 2004, p.1). This Petty Officer will supervise between one and five individuals in the completion of an assigned task. Task assignments are usually determined by the work center's leading Petty Officer or Chief Petty Officer.

One of the requirements for promotion to Petty Officer Third Class is completion of the First Line Leadership Development Course offered by the Center for Naval Leadership. This nine-day course is offered in a schoolhouse setting. The course venue is comprised of lectures from instructors, reading assignments, completion of assignments though a computer based tutorial, and classroom discussion. Though there is no final test to determine level of knowledge, all students graduate provided they attended the course and completed the assignments.

The First Line Leadership Development Course was designed to help new leaders employ leadership and management techniques in order to increase work center

performance. The course provides an introduction to understanding responsibility, authority, and accountability. Communications, ethics, and developing subordinates are taught with their influence on organizational climate. Course themes include: leading people, working with people, resource stewardship, leading change, and mission accomplishment. Students are introduced to the five vector model of personnel development adopted by the Navy with emphasis on the Human Performance Feedback and Development (HPFD) model. The HPFD model is the tool used for self development and development of subordinates. The two-week course closes by tying together the learning points with leadership under combat and crisis.

Primary Leadership Development Program

The second leadership course required for advancement of enlisted sailor's in the U.S. Navy is called the Primary Leadership Development Program. This course is designed for "the individual assigned the leadership roles and responsibilities for planning and executing divisional functions; to include the professional and personal growth of those personnel assigned within that division" (Center for Naval Leadership b, 2004. p.19.). This course is provided as the Petty Officer prepares for greater leadership responsibilities. Already the Petty Officer has gained experience leading one to five individuals in specific assigned tasks. The next step for career progression involves become the Leading Petty Officer (LPO) for a Division.

The Division is the building block within a Navy Command. Most Divisions have an Officer assigned as well as a Chief Petty Officer (the "Chief"). The most experienced Petty Officer working for the Chief is designated the LPO. Often this is the most senior "Blue shirt" but it is always the most capable Petty Officer. The term blue shirt came

about due to the blue denim working uniform worn by paygrades E-1 to E-6. The Chiefs and Officers are recognized by their Khaki uniforms. A Division consists of between 10 and 50 sailors of similar rates and is bound together by a commonality of tasks required. For example, 1st Division might consist of 35 Boatswains Mates that are responsible for handling the lines and anchor required to moor the ship. The Auxiliaries Division might consist of 20 Machinists Mates that are responsible for ancillary equipment outside of the main propulsion spaces. While there may be more than one E-6 in a Division, there can be only one LPO. The LPO is designated in writing by the Commanding Officer and has enormous responsibility. This sailor may have between 6 and 20 years of naval service. While six years is the minimum time required to be promoted to the paygrade of E-6, most LPOs will have over 10 years of service.

The Primary Leadership Development Program (PLDP) is a nine day course. This course picks up where the First Line Leadership Development Program stopped. The PLDP begins with the role of the LPO in a combat or crisis situation and expands upon their responsibility, authority, and accountability in maximizing unit performance. More people skills are introduced and discussed that include counseling techniques, reducing conflict, and effective communication. The LPO is introduced to the concept of delegation. For the first time in a Petty Officer's career, they may be facing situations where the scope of work required exceeds their own personal ability. Their span of responsibility often requires delegation of work to others in the Division. Subordinate development and quality of life concepts are also part of the curriculum. Writing evaluations on others will be a new experience for these Petty Officers. Many of them will learn to balance the role of friend and boss for the first time. For the first time, Petty

Officers in the PLDP are taught recourse management tools and decision making tools. Petty Officers are taught four decision making styles; individual/authoritative, minority/coalition, majority, and consensus. Building a consensus is not always easy but using a tool such as the Nominal Group Technique (NGT) or multi-voting. In the NGT, the topic is articulated with several ideas and team members order rank most important to least. Multi-voting is a process where ideas are voted upon with the least supported ideas being removed from the selection. After a brief discussion, voting is resumed to further reduce the number of ideas. This process continues until a choice is left. Lastly, Petty Officers are introduced to the concept of a systems and subsystems approach to how their organization fits into the overall command mission.

The PLDP course builds on the First Line Leadership Development Program and the additional experience of an E-5 or E-6 Petty Officer. Greater emphasis has been placed on different leadership styles, accountability, and ethics. Included in the course (Primary Leader, 2004, p. 2-2-4) is a reaffirmation of the Navy Petty Officer's Creed as stated below:

> I am a Petty Officer in the United States Navy, the strongest Navy in the world. I have the distinct privilege of being a leader of the finest sailors anywhere. As such, I owe my Sailors leadership that they can depend on, trust, and follow.
>
> I will neither fear nor shun responsibility and I am always responsible for my actions. I am always fair and impartial when dealing with my Sailors; remembering not to accept full credit for a job well done without proper recognition of my Sailors first.
>
> I am loyal to my subordinates, peers, and those officers appointed over me. I cannot favor either; my integrity must be beyond reproach.
>
> I will fully support all Navy Regulations and Articles of the Uniform Code of Military Justice. I have the duty to correct and report all violations of these regulations that govern my Navy.

I instill Esprit de Corps throughout the Petty Officer grades in the Navy; bearing allegiance to each other.

I owe all of the above not to just myself, but to the United States, to my Navy and to the sailors who work for me.

Advanced Leadership Development Program

One of the requirements necessary before a sailor is eligible for consideration as a Chief Petty Officer is completion of the Advanced Leadership Development Program (ALDP). This nine-day course is taught at the E-6 paygrade. This course builds on the previous two courses and emphasizes planning, subordinate development and counseling, decision making, and team development. The objective of ALDP is to provide "the individual assigned the leadership roles and responsibilities for planning and executing divisional/departmental functions; to include the professional and personal growth of those personnel assigned" (Center for Naval Leadership c, 2004, p. 1). While the ALDP shares some commonality with the previous two courses, it builds on the concept of team development at the Departmental level. This course is designed to prepare Leading Petty Officers in taking the next leadership and promotion step to Chief Petty Officer as an E-7.

In the Navy there is a significant difference between paygrade E-6 as a First Class Petty Officer and paygrade E-7. Becoming a Chief Petty Officer goes beyond changing the uniform from dungaree blues to khaki browns. It has often been said the "Chief" (Chief Petty Officer) forms the backbone of the Navy (Leahy, 2004). The tone of the ship, the tone of the service itself is determined directly by the Chief Petty Officers more than from any other group in the Navy. An exceptional sailor can be promoted to Chief Petty Officer in nine years. However, twelve to fourteen years of naval service is a more common timeframe for selection to Chief Petty Officer. A Master Chief Petty Officer of paygrade E-9 can serve up to thirty years in the Navy.

There are two significant organizational differences a Chief Petty Officer has compared to the Leading Petty Officer. The Chief maintains a level of responsibility and authority that transcends across Divisional and Departmental lines. It is this ability to work across traditional stove pipe boundaries that make Chief Petty Officers so effective. By organizational design, Departments in Navy commands have vastly different functions. Often Departmental interests are not aligned with the organization as a whole. Chief Petty Officers form the glue that holds the command team together.

The ALDP is tailored to provide leadership skills expected of a Chief Petty Officer. The course includes sections of effective communications, planning and resource stewardship, subordinate development, counseling, team development, decision-making and risk management, and command unity. In addition to classroom films, online courses, and lectures from guest speakers, there is an opportunity to hold discussions on real world scenarios. For the first time in the Navy's formal leadership training continuum, students are introduced to viewing their world through a systems approach (Advanced Leader, 2004). The concepts of understanding the interrelation of different parts of the system are explored from the functioning of the Chiefs' Mess to how to run a mentoring program. Through this understanding, Chief Petty Officers are often able to see the connection of seemingly non-related events. This understanding has an operational dimension that impacts organizational performance to safety of equipment and personnel.

Case Studies

Leadership development is a big business. The American Management Association (AMA) estimates 90 percent of all U.S. companies invest in some form of a leadership development program (Galvin, 2001). In 1993, Business Week estimated that

companies spent $17 billion to help managers develop the thought processes and company-specific skills to enable them to move up and lead their businesses (Melum, 2002). Much of this money was spent on a narrow definition of leadership development. For example, the AMA found that most of what is called leadership development in U.S. companies is coursework, with 77 percent of leadership development taking place in classrooms (Galvin, 2001). The AMA survey also found that 78 percent of respondents participated only one time or occasionally in leadership development activities, and 50 percent used an informal ad hoc approach. Evaluations of leadership development highlight the opportunity for improvement. On a scale of 1 to 7 (7 being best), participants in the AMA survey gave their leadership development experiences an overall rating of 4.33 (Galvin, 2001).

Ninety percent of the top 100 organizations align personal development planning with corporate mission, goals, and objectives. For example, Pfizer has six strategic initiatives, all of which are actively supported by training programs. Two of the six strategies are specifically related to development: colleague development and the implementation of six consistent leader behaviors. Leadership behaviors are integrated into all of Pfizer's human resources and business practices, and 20 percent of a senior executive's bonus is tied directly to how well these behaviors are embodied (Drucker, 2002).

The literature is rich with various approaches to leadership development programs. Some of the literature focuses on methodology employed to develop leaders. Other literature uses case studies as a framework to discuss leadership development programs. Review of case studies is outlined in this section. Case studies provide real

world empirical data as well as time tested methodologies that worked for these companies.

Case Study at Sage Publications

Sage Publications is a leading international publisher of books, journals, and electronic media. Sage is a privately owned publishing company based in the United Kingdom dedicated to the global dissemination of information. Since its inception in 1965, Sage Publications has continued to enjoy tremendous growth. Originally focusing exclusively within the social sciences, Sage now publishes across a variety of disciplines and professions. Constituents and authors include scholars, researchers, policymakers, professionals, and students (Sage, 2004).

The past several years at Sage have seen a 17 percent increase in turnover due to rapid growth, acquisitions and turnovers (Landale, 2003). The company sought to employ a leadership development program to improve staff and business performance. Sage selected Stirling Training Consultants (STC) to develop a leadership development program focusing on providing coaching support, delivering leading-edge management skills, through workplace learning on live projects. The ten-day leadership program, divided into four modules, was designed to tackle real world management issues. The first module, Being in Control, focused on personal organization and management such as how to deal with vast amounts of email. The second module focused on people development which interweaves five key management principles. Landale (2003, p. 707) outlines the five principles of 5-IMT below:

1. The way managers pass on information. Teaching, training, coaching and telling all require different skills, and on the program, managers look at how to impart information effectively as well as considering people's different learning styles, so that the message is delivered and received in a digestible form.

2. Packaging the content in motivation. Many organizations use only extrinsic motivators such as bonuses and perks, but people also have personal motivators, and a manager needs to understand what these are. The intention here is to help managers to pick just the right words, and follow through with the correct actions, to get each team member working to his or her best ability.

3. The use of positive pressure. There is always pressure at work through, for example, standards, responsibilities, peer groups, time or achievement. The challenge for managers is to balance positive pressure with motivation, which then helps people to "go that extra mile".

4. Building people's "success role". Success roles are all about self-confidence and having a well-founded belief in one's own ability. It is what Olympic athletes have and children who play truant from school typically do not. In this session managers learn ways of enhancing the self-worth of their staff and how success roles can be a double-edged sword with the pressure of success.

5. Monitoring the balance. Managers also need to monitor the balance of these four influences so that they can see what impact they are having. This sounds easy, but accurate monitoring is often one of the most challenging aspects of 5-IMT.

The third STC module at Sage included a two-day intensive event that reviewed how managers empower while keeping the business bottom line in perspective. Coaching was integral to Sage teams taking ownership of the projects. The final module brought the whole program together by applying what was learned to a major project.

Executives involved in the STC program gained a renewed confidence in their managerial skills during a time of growth and transition. Through the STC executive program, Sage Publishing identified cost savings and increases in revenue that made an impact on the company's profitability (Landale, 2003).

Case Study at Ontario Power Generation

In May 2002, the Ontario Government opened the electric and gas utilities marketplace to private competition. (OntarioHydo, 2004). Ontario Hydro, the existing utility would face competition for the first time. While the company had always done leadership development, there was a very real need to fundamentally shift how they

developed leaders (Brown, 2004). A more holistic approach was needed to ensure leaders and managers could adapt and thrive in the new environment. The human resources team at the newly formed Ontario Power Generation (OPG) partnered with the Rotman School of Management at the University of Toronto to develop a five-day intensive off-site program they dubbed MBA-in-a-box. The course included a session on the importance of soft skills for successful management. The course included a complete 360-performance appraisal reviewed with an industrial psychologist. In one year, OPG put 500 executives, managers and high-potential employees through the program. While there was a significant cost to the program, the executive team was very interested in the return on investment built into the program. The program has proved to be cost effective and continues to be implemented (Brown, 2004).

Case Study at 3M and HealthPartners

A recent study at 3M and HealthPartners looked at the affect of a high-powered leadership development program on the organization's performance. 3M is a diversified technology company with $16 billion in annual revenues in the electronics, safety, health care, telecommunications, industrial, consumer and office industries. More than half of 3M sales come from outside the United States. In the health care industry, 3M is known for more than 4,000 medical, surgical, pharmaceutical, and dental products. 3M is recognized for innovation, including its goal that 25 percent of revenues come from new products and services (Melum, 2002).

3M renovated an existing building creating an on-campus facility that was turned into the 3M Leadership Development Institute. Many of 3M's most promising leaders attended an intense, 17 day accelerated development experience there. This includes five

days of content learning. In addition, employees develop real-world solutions to current business problems selected by the CEO. 3M believes that it should have the internal capabilities to teach leadership. Therefore, other than a few outsiders, 3M executives teach and lead most of the sessions. The CEO actively participates for three to four hours of the five day program. According to Melum (2002, p. 65), there are six key elements in 3M's leadership development system that include:

1. Leaders teach leaders.
2. Leadership attributes clarify expectations.
3. There is a focus on growth through Six Sigma.
4. An accelerated leadership program targets potential high performers.
5. Development is focused on the company's business goals and strategies.
6. The top leader is a champion of leadership development.

HealthPartners is a consumer-governed family of nonprofit Minnesota health care organizations focused on improving the health of its members and the community. HealthPartners and its related organizations provide health care services, insurance, and health maintenance organization coverage to nearly 660,000 members. More than 9,200 employees staff the various HealthPartners organizations. The HealthPartners family includes the HealthPartners Medical Group and Clinics, RiverWay clinics, HealthPartners Central Minnesota Clinics, HealthPartners Dental Group and Clinics, Regions Hospital, Regions Hospital Foundation, HealthPartners Research Foundation, HealthPartners Institute for Medical Education, and Group Health, Inc (Melum, 2002). HealthPartners has a leadership development system that invests about $915 per employee on leadership and staff development, or 1.3 percent of payroll.

At HealthPartners, the leadership development program has an overall goal of instilling culture and direction. There are four goals for leaders that include, heading in the same direction, understanding the organization's mission and vision and how individual work fits within this context, understanding the organization's strategy, and having an external perspective.

In addition to the business unit approaches, an enterprise wide leadership development committee has developed and maintains a leadership development program for director level staff. Three of these leadership development programs are: The People Connection, The Leadership Roundtable, and Strategic Learning. The People Connection includes dialogue and understanding between the officers of the corporation and director level leaders (middle management) occurs across the company. At The Leadership Roundtable expert speakers present topics of timely interest. Strategic Learning includes an integrated understanding of the corporate strategic agenda and knowledge of the health care industry are taught. This course includes ten sessions taught by senior business leaders that include the company’s president and vice presidents.

HealthPartners evaluates the components of its specific leadership development programs. A survey of participants in HealthPartners People Connection revealed that 84 percent of attendees rated this program as very valuable and informative (Melum, 2002).

Case Study at GE

GE is a diversified technology, media, and financial services company with a focus in creating products that make life better. From aircraft engines and power generation to financial services, medical imaging, television programming and plastics, GE operates in more than 100 countries and employs more than 300,000 people

worldwide. In 2003, GE had revenues in excess of $134 billion (GE Fact Sheet, 2004). To be a leader at GE you had better be a top-notch manager according to Tarley (2002). GE's culture is famous for its values, developed over years of input from GE managers. Performance appraisals, feedback, and goals are constantly measured against those values. Leadership and management development are core to GE's philosophy. Successful managers are given increasingly larger businesses to run and rotated into different business sectors. GE is famous for its state of the art theater-style conference facilities complete with recreation buildings and fully stocked kitchens. GE employees fly in from all over the world to attend a two to three week leadership development session. There are two basic components to GE's leadership development program. First, knowledgeable people who are experts in their field are chosen to mentor others. This approach utilizes people with specific skills and creates connectivity among people in the division. Second, the use of outside experts is used to confirm of what's being taught internally. Senior executives play a crucial role in GE's leadership development program by helping build future leaders within the organization. Senior executives serve as models by delivering seminars to the emerging leadership group showing a commitment from the top of the organization. By sharing their own experiences senior executives develop a connection with others in the organization.

GE measures the results of its leadership development program by determining if there has been an impact on the bottom line, either through increased revenues or decreased costs. Where there is no bottom line link, the leadership development program chooses other metrics such as did the participants see value in the program. Also GE

applies 360-feedback instruments to see whether participants are using the skills and concepts on the job (Tarley, 2002).

Case Studies in the Military and Maritime Industries

The Norwegian Naval Academy conducts a one week intensive seminar in its officer leadership development program on team and leadership development. Both case and statistical analyses were used to examine the effect of this program. Twenty-four Norwegian naval cadets participated in a four day exercise after working together in teams for a year. Interpersonal ratings were collected before and after the exercise. Performance data was collected in the field. The results showed that the ratings predicted leader and group performance. The exercise was shown to have significant effects on team and leadership development (Polley & Eid, 1990). The leadership patterns tended to consolidate as a result of the exercise. Benefits of the exercise included challenging stereotypes and reintegrating potential scapegoats into the mainstream of the academy. The cadets have continued to use their week on the Bergen Fjord as a point of reference in their development.

Royal Dutch Shell is a global group of energy and petrochemicals companies, operating in more than 145 countries and employing approximately 119,000 people. Approximately 3% of the world's oil and approximately3.5% of the world's gas is produced by Shell companies, similar to other major private oil and gas companies. The company is most recognized for their retail stations and for exploring for and producing oil and natural gas (Quick Guide to Shell, 2006). Royal Dutch Shell has created a leadership development program called Focused Results Delivery (FRD). FRD was in integral part of a total transformation process of Royal Dutch Shell in 1995. FRD is

ongoing process that continues to leverage Shell's legacy and culture that are perceived as having the most valuable to Shell's future. Improving return on the company's investments, increasing the companies share in the marketplace, and increasing the company's focus on customers is part of the FRD initiative. Through FRD, Shell leadership has developed a wide array of business transformation skills from performance improvement, project management, vision setting, and teambuilding (Niemes, 2001).

Fiedler & Mahar (1979) conducted twelve studies testing the effectiveness of the Leader Match approach to leadership development. Leader Match trains leaders to recognize their leadership styles and diagnose situations. This allows leaders to provide controls in their work environment that can be modified to different leadership techniques. For example, task motivated leaders have more effective groups under conditions of low or high situational control. Relationship motivated leaders have more effective groups under conditions of moderate situational control. The Leader Match leadership development program was presented in a self paced, programmed instruction manual. Five of the studies were undertaken in civilian organizations and seven were conducted in military settings. Performance evaluations were collected two to six months after attending the leadership development program. Some studies included pre and post measures. The performance evaluations of trained leaders were compared with control group leaders. All 12 studies indicated statistically significant results that support Leader Match leadership development. The results suggest that Leader Match leadership development is effective for improving leadership performance (Fiedler & Mahar, 1979). The Leader Match approach appears to be effective for individuals who have steeped in

leadership development for a number of years and seems to be one of the most cost-effective methods for improving leadership performance.

Compare and Contrast Corporate Programs with Navy Programs

The private sector and the U.S. Navy share many views on leadership development programs. For example, both institutions believe their organizations will enjoy a competitive advantage as a result of the investment in leadership development programs. Private institutions see enhanced competitive advantage in terms of lower operating costs, leveraging technology and human capital to increase revenue (Porter, 1980). The U.S. Navy views increased competitive advantage in terms of lower operating costs and greater combat readiness of equipment and crews. Consequently, both institutions place a premium on leadership development.

Leadership development in the private sector tends to be seminar based lasting one to three weeks and is focused on corporate strategy and vision. In the case of Sage Publishing, the course was a blend of practical skills and organizational skills helping leaders communicate more effectively with their peers and subordinates (Landale, 2003). HealthPartners, 3M, and GE also incorporated mentoring and performance appraisals in their leadership development programs (Melum, 2002, Tarley, 2002).

Navy leadership development programs are targeted toward the most junior Petty Officers to senior Admirals. This paper focuses on leadership development programs geared toward enlisted sailors. The U.S. Navy also had courses lasting two weeks in length and targeted three different experience levels, the primary leader (paygrade E-4), first line leader (paygrade E-5), and the advanced leader (paygrade E-6). These courses

also discussed the Navy's vision as far as mission and personnel development. Mentoring and performance appraisals were included in the course material as in the private sector.

There were noted differences in leadership development approaches between the private sector and the U.S. Navy. For example, practically all of the private sector seminars involved senior leadership from the organization (Landale, 2003, Melum, 2002, Tarley, 2002). While the seminar venue was typically outsourced, it was common for the CEO to have an active part in the leadership development. Conversely, U.S. Navy leadership development for Petty Officers is conducted outside the command following a format also put together by industry experts. The difference is the lack of participation by the parent command at the training. When course graduates return to their respective commands, they return to an environment that may not be in sync with the course material. Another difference between the private sector and U.S. Navy approach to leadership development is the target audience. According to the Center for Creative Leadership, only three percent of their participants are first level leaders in the company whereas seventy-one percent are mid-level leaders (Center for Creative Leadership, 2002). The U.S. Navy on the other hand requires all of its leaders to attend various forms of leadership development. This is due primarily to the fact the U.S. Navy can only promote from within. The Navy is viewed as an apprentice organization where all service men and women are recruited as a novice and must work their way up through the system. The U.S. Navy does not have the ability to hire leadership from the outside. Therefore, all of the leadership development, values, and culture are self-generated. This is not true of the private sector that has the ability to hire outside the organization. While most of the senior leaders are promoted from within as evidenced by strong succession

planning, companies do have the option of hiring from outside their culture if deemed necessary. Finally, private industry has a more developed mentoring program than the U.S. Navy. While the Navy prides itself on a mentoring program for all paygrades, the Navy's formal program is confined to an organizational command where there is a one third turnover of the crew every year. In other words, the Navy does not have a formal mentoring program that transcends the organizational command. Keeping the same mentor-mentee pair seldom lasts more than a year. There are many examples of the same mentor-mentee pairs lasting years, but this is an exception based on mutual friendships and usually multiple tours together and is not based on a Navy program. The private sector enjoys a more stable work environment where mentor-mentee pairs can last for an individual's entire career.

Formal Navy leadership development programs tend to be more theory based with some discussion on desirable attributes at a general level. As Ulrich, Zenger, & Smallwood (1999) found in their research, behavior-based attribute models are more effective than theory based models particularly if an emphasis is placed on leaders demanding results. The Navy is very goal and task oriented. Results are demanded of sailors and supervisors every day, sometimes every hour. It is a short coming of formalized Navy leadership schools not to devote more time and emphasis on producing results and how to produce results.

Conclusion

There is a solid theoretical foundation linking leadership to organizational performance. Elements of both leadership and organizational performance can be clearly derived from the literature. Taking a systems perspective of understanding those elements

and the relationship between leadership and organizational performance is supported by the work of Craig (1999), Mitchell & Poutianine (2002), and Whitemountain (2005).

Both private industry and the U.S. Navy believe their organizations will enjoy a competitive advantage as a result of the investment in leadership development programs. In the case of private institutions, this advantage should render greater efficiencies contributing to the bottom line. As stated by Drotter & Charan (2001), a strong leadership development program can facilitate succession planning, feedback in individual performance, guidance in organizational promotions, and reduce the time required to grow top-level leaders in the corporation. Fiedler & Mahar's (1979) research link improved leadership performance with leadership development programs. In the numerous case studies reviewed from Sage Publications, Ontario Power Generation, 3M, HealthParner, and GE to the case studies involving the military institution's leadership development programs, credit was given for improving performance of the organization.

The U.S. Navy shares some common views on leadership development with private industry. One to three week seminar style courses are designed to address real world problems, facilitate teamwork, and decision-making. Counseling and performance assessment tools are taught to help leaders provide more critical feedback and hold subordinates accountable for their actions. The Navy provides leadership development to a broader population base than private industry. However, private industry enjoys a more focused leadership development curriculum in sync with the organizations immediate objectives and enjoys the personal attention of senior executives.

Leadership development will be a topic of debate and research for years to come. It can be expensive, involving thousands of dollars per individual. But both private

industry and the U.S. Navy are banking on this investment in human capital paying off significant dividends for the organization.

CHAPTER 3. METHODOLOGY

Introduction

Research is the "careful, systematic, patient study and investigation in some field of knowledge, undertaken to discover or establish facts or principles" (Agnes, 2002, p. 1219). The Federal Register (June 18, 1991, p. 28013) defines research as "a systematic investigation, qualitative or quantitative, which includes research development, testing and evaluation that is designed to develop or contribute to generalizable knowledge". Over the years a plethora of approaches in study design have been employed. The field of research design has matured as research approaches have multiplied. Use of the scientific method, i.e. hypothesis testing by means of a repeatable documented controlled experiment, is a proven way to conduct research and is one process to emulate. Using an existing framework for study allows the researcher to develop a study structure grounded in literature and recognized by the reader.

Research Framework

Crotty (1998) established a framework for designing a research proposal. There were four principles that must be determined in laying the groundwork. First is the determination of the epistemology. Having basis for the understanding of the nature and limitations of knowledge will relate to a theoretical perspective. This leads to the second principle; knowing the theoretical perspective that shapes the methodology. From the methodology, the third principle governs the choice of and use of methods that link methods to outcomes. The fourth principle determines what methods, techniques, and procedures are used.

Creswell (2003 p. 5) conceptualized Crotty's model by asking three questions central to the design of research that ask:

1. What knowledge claims are being made by the researcher (including a theoretical perspective)?
2. What strategies of inquiry will inform the procedures?
3. What methods of data collection and analysis will be used?

Knowledge claims, strategies, and methods combine to form different research method approaches through the use of three types of inquiry. In designing a research proposal, assessing the knowledge claims, selecting a strategy of inquiry, and identifying specific methods will assist the researcher in identifying quantitative, qualitative, or mixed methods approaches most appropriate for the study.

Researchers often start a project with certain assumptions about how and what they will learn that formulate a knowledge claim (Creswell, 2000 p.6). Mertens (1998) called these knowledge claims paradigms. There are four major schools of thought about knowledge claims. These are: postpositivism, constructiveism, advocacy/participatory, and pragmatism. Postpositivism has its roots in governing beliefs in what warrants knowledge. Postpositivism is the most traditional knowledge claim that employs an approach called the "scientific method". Quantitative research is often associated with postpositivism. Phillips and Burbules (2000) are two current writers that discuss the postpositivist traditions. Constructiveists claim knowledge through different processes and assumptions. Individuals seeking understanding of their world often turn to their experiences. Since individual experiences are as diverse as the people who experience them, meanings vary, are multiplicative, and complex. This diversity leads researchers to look for complexity of views rather than narrowing meanings into fewer categories.

Researchers generate or develop patterns of meaning that lends itself to qualitative inquiries (Schwandt, 2000). Some researchers believe the constructiveism approach did not go far enough in addressing social issues. Many individual viewpoints were marginalized and did not take politics or a political agenda into account. Advocacy/participatory approach to knowledge claim research should contain an action agenda for reform that may change lives, institutions, and the researcher (Creswell, 2003, p. 10). Specific issues should address compelling social issues of the day. Kemmis and Wilkinson (1998) summarize the advocacy/participatory approach with four key features. These include relating to an important social issue, creating a political debate and discussion to affect change, advancing an action agenda for change, and engaging participants in the inquiry. The fourth knowledge claim encompasses the pragmatic approach where solutions to problems are more important than methods. Cherryholmes (1992) states the pragmatism approach is not committed to any one system of philosophy or reality; that we need to stop asking questions about the laws of nature. Researchers are free to choose methods, techniques and procedures but must always occur in a social, historical, or political context. A mixed methods study works well with the pragmatist researcher who is open to multiple methods and different worldviews.

The second level of inquiry that goes into a research approach involves an overall strategy on the research approach. The two principal strategies involve experiments in the classical sense where subjects are treated and observed, and longitudinal and cross-sectional surveys where individuals are interviewed for data. There are numerous strategies involved with both experiments and surveys. Some of these work well with qualitative methods, others with quantitative methods, and still others that can work with

both methods which we call the mixed methods approach. Creswell (2003) illustrates numerous strategies including: experimental designs, ethnographies, grounded theory, case studies, phenomenological research, narrative research, sequential, concurrent and transformative methods. Rather than focusing on the specifics of each, what is important to know is that there are numerous strategies of inquiry that can be employed based on the knowledge claims of the researcher that provide specific direction for the procedures to be used in research design.

The third and final major element that goes into a research design is the specific methods of data collection and analysis. Factors such as use of open ended or closed ended questions and use of numeric or non-numeric data analysis can help determine the study method. The type of knowledge claim and strategy employed also help determine the appropriate study method. In summary, there are three types of approach methods used in studies; these are qualitative studies, quantitative studies, and mixed method studies.

Research Methodology

Based on the knowledge claims, strategies of inquiry, and methods of data collection and analysis proposed, a mixed method approach provides the best research framework for this study. Mixed method studies take the approach that the researcher's knowledge claim is pragmatic in nature and tends to be problem centered. Strategies of inquiry involve data collection methods that best fit the research problem. Data will be numeric, collected through surveys. "The researcher bases the inquiry on the assumption that collecting diverse types of data best provides an understanding of a research problem" (Creswell, 2003, p. 21). Mixed method approaches to studies often address

social issues where the inclusion of multiple methods of data collection and data analysis better fit the problem (Tashakkori & Teddllie, 2003).

Mixed method studies include several approaches (Creswell, 2003, p. 209):

1. Definition of mixed methods research.
2. Identify criteria for mixed methods strategy.
3. Establishment of procedures of data collection and analysis.
4. Determination of the quantitative and qualitative validation procedures.

The mixed method approach focuses on collecting and analyzing both quantitative and qualitative data in a single study. “The study typically begins with a broad survey in order to generalize results to the population and then focuses, in a second phase, on detailed qualitative, open-ended interviews to collect detailed views from participants” (Creswell, 2003, p. 21).

In this study, a broad survey will be used with a focus group to determine those specific skills that need to be included in the organizations tailored leadership development program. Once the organizations leadership development program is implemented, a qualitative approach using a survey instrument will be used to test developed hypotheses.

Restatement of the Problem

The United States Navy invests time and money into developing its leaders. The desired outcome of leadership development is an organization that is better prepared to conduct its mission. Leadership development in the Navy comes in many forms from formalized schools and organizational training to informal mentoring and observation.

The main purpose of this study is to determine if formal leadership development programs improve organizational performance for the Navy's First Class Petty Officers in the United States Navy. The formal leadership development occurs in two forms. First, formal leadership development occurs at Navy School houses and is required of all First Class Petty Officers in the Navy for advancement. Second, formal leadership development focuses on improving leadership attributes provided by the organizational command to its First Class Petty Officers. As stated in Chapter 1, this study will investigate the ability of the Navy's existing schoolhouse leadership development programs and a tailored attribute based leadership development program in improving an organization's performance. Additionally, this study will investigate if one type of leadership development program has more of an affect on the organizations performance than the other. The following alternative hypotheses will be addressed:

1. H_1 In the view of subordinates, leadership development in Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship.
2. H_2 In the view of subordinates, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship.
3. H_3 In the view of peers, leadership development at Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship.
4. H_4 In the view of peers, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship.
5. H_5 In the view of supervisors, leadership development at Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship.
6. H_6 In the view of supervisors, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship.

7. H_7 In the view of peers, the ship's attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship better than the Navy school house leadership development programs.

8. H_8 In the view of supervisors, the ship's attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship better than the Navy school house leadership development programs.

Developing appropriate hypotheses is a skill. A properly constructed hypothesis would be designed to minimize type I error (which is the probability of rejecting a true hypothesis). Therefore, in proper study design, the significance testing is done on the null hypothesis. The null hypothesis, H_o, "is a statement that no difference exists between the parameter (a measure taken by a census of the population or a prior measurement of a sample of the population) and the statistic being compared to it (a measure from a recently drawn sample of the population)" (Cooper & Schindler, 2003 p. 523).With this in mind, the following null hypotheses will be tested:

1. H_{1o} In the view of subordinates, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

2. H_{2o} In the view of subordinates, attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

3. H_{3o} In the view of peers, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

4. H_{4o} In the view of peers, attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

5. H_{5o} In the view of supervisors, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

6. H_{6o} In the view of supervisors, attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship.

7. H_{7o} In the view of peers, the ship's attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship better than the Navy school house leadership development programs.

8. H_{8o} In the view of supervisors, the ship's attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship better than the Navy school house leadership development programs.

Research Variables

A research variable is any entity that can take on different values (Trochim, 2001 p. 150). An independent variable can cause, influence or affect outcomes. These are the variables that a researcher treats or manipulates. A dependent variable is what is affected by the independent variable. Dependent variables are the outcome from independent variables. The nature of variables (how variables interact for any given phenomenon) is applied in research as the treatment or program or cause (independent variables) and is affected by them (dependent variables). Intervening or mediating variables can mediate the effects of the independent variable on the dependent variable. These variables can play an important part in understanding the affect on a dependent variable especially when the outcome is not what is expected. The nature of experimental research variables is shown in Figure 4.

Trochim (2001) observes that in a study there are two traits of variables that should always be achieved. First, each variable should be exhaustive; that is, it should include all possible answerable responses. Second, the attributes of variables should be mutually exclusive; that is, no respondent should be able to have two attributes simultaneously.

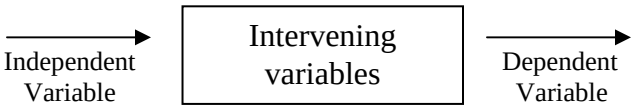

Figure 4. Nature of experimental research variables.

For this study, the independent variable will be the ability of First Class Petty Officers to improve their organization's performance before the intervening variable is introduced. The intervening variable takes the form of formal leadership development at Navy school houses and formal leadership development that is attribute based provided by the organization. The dependent variable thus becomes the ability of the First Class Petty Officer to improve their organization's performance following this leadership development program.

Research Approach

The research approach describes how data are collected, treated and analyzed in a study. Two approaches applied to most research studies include the interpretive and the analytical approaches. The interpretive approach utilizes qualitative measures to generate a new theory (Trochim, 2001 p. 152). The interpretive approach encourages the researcher to focus on naturally occurring, ordinary events in natural settings so they have a strong perspective of reality (Miles & Huberman, 1994 p. 10). The researcher studies a specific case by examining the influences of the local context and by collecting data over a period of time to identify the variations with time. The researcher may discover how people perceive situations in relationship to real life. The main emphasis of the

interrogative approach seems to be the study of cases versus samples from a population (Gall, Borg & Gall 1996, p. 30).

The analytical approach involves any research that collects numeric data on a sample of the population for analysis. The researcher draws generalizations about a population through the study of a sample of a population (Trochim, 2001 p. 153). This approach shows the generality of specific observations while ensuring objectivity of the event, process or program (Miles et al., p. 41).

Kuhn (2002, p. 147-156) observes that the important difference between the interpretive and analytical approaches to research is not the kind of data they work with, but in their underlying assumptions about knowledge. The underlying assumption in analytical research is that social reality remains the same for different groups and environments. The underlying assumption with the interpretive approach is that inquiry begins with the ordinary human understanding that exists at any time and emerges from there. Assumptions held about knowledge are often taken for granted and embodied in the practices of research. Such assumptions will remain unnoticed unless they are called into question.

For this study, an interpretive approach will be taken during the first qualitative phase of the study using a focus group to determine the contents of the organization's formal attribute based leadership development. The second phase of this study takes an analytic approach by collecting data via a survey instrument on crew members of the ship.

This study follows a similar path to the case studies illustrated in Chapter 2. The Sage Publications case study involved use of current projects. While the Navy's formal

leadership development programs do not follow current projects, the ship's in-house program did use current projects. In both the Ontario Power and GE case studies, 360 performance appraisal reviews were used as evaluation criteria. Again, the ship's in-house leadership development program also used 360 degree assessments. The 3M and GE case studies attributed much of the success to their programs through the active participation of those institutions senior leadership. Though this was not the case for the Navy's formal schoolhouse programs, the ship's in-house leadership development program relied heavily on the organizations senior leadership participation.

The research approach of this study duplicates the approaches of many other successful leadership development programs found in industry. The primary difference between industry's focus and the focus of this study is the target audience of the study. Industry studies focused mostly on senior leadership within the organization. The belief was target the audience that could provide the greatest return to the organizations bottom line. The conclusions of those studies supported that assumption. This study's focus is to test the assertion that similar investments in leadership development focused at first line leaders, those leaders on the deck plates responsible for the day to day execution of the organizations mission, will also benefit from leadership development and as a result the organizations performance can be improved.

The Qualitative Phase

The qualitative first phase of this study enabled the researcher to determine which attributes were important to improving organizational effectiveness. Those attributes became the intervening variables. This study investigated the affect of those intervening variables on the dependent variable which was organizational performance. The

intervening variable came in two forms; First, through formalized leadership development that has been predetermined by the Navy on content, and second, through the formalized leadership development provided by the organization specifically tailored to improve organizational performance through teaching specific attributes. The organization's leaders needed to determine what those attributes were since they knew what metrics determine the organization's performance. Organizations in the Navy have different missions. The organizational performance is measured differently for different types of organizations. Formal Navy schoolhouse leadership development is very general and is designed to be applicable across all Navy organizations. The tailored leadership development can be focused to meet the needs of a specific organization.

During the qualitative phase of the study, an organizational level leadership development program tailored specifically for First Class Petty Officers was developed. Specific skills were taught designed to help the first line leader manage their organization in becoming more effective. The best qualified individuals for determining the desired skills were the Chief Petty Officers (CPO) whom the First Class Petty Officers work for and specific targeted Department Heads that had been Chief Petty Officers before receiving an Officer's commission. Chief Petty Officers have daily contact with workers in their organization though they do not directly supervise them. Department Heads and CPOs also have an understanding of what the mission of their organization is. A focus group consisting of those selected Department Heads and CPOs responded to the questions in the survey shown in Table 1.

Background information was provided with the focus group survey. This background information contains excerpts from the Chief Petty Officer Competency

Model Report (Ennis, et al, 1985) that discussed those skills and attributes demonstrated by high performance CPOs in top performing organizations as well as an outline of the material presented during the Navy's formal PLDP and ALDP courses (see Appendix A).

Table 1

Focus Group Survey

List management related skills you expect out of a Leading Petty Officer (LPO).
Which of these skills would you like to see taught aboard your ship?
List any leadership related skills not already taught at the Navy school houses you expect of an LPO.
Which of these skills would you like to see taught aboard your ship?
List personal characteristics you expect of an LPO.
Which of these skills would you like to see taught aboard your ship?

After collecting the results of the focus group, an outline of a course was developed (see Appendix G). The course material was prepared by the CPOs who also taught the material. The purpose for selecting the CPOs in course development and instruction is two fold. First, CPOs are uniquely qualified to provide this instruction since they were once First Class Petty Officers and understand the type of leadership development they received in the past as well as what is expected of their leadership abilities. Second, CPOs are charged with mentoring the First Class Petty Officers who will one day be promoted and occupy the positions the CPOs are now in. Completion of

the organizational level leadership development course concluded the qualitative phase of this study.

The Quantitative Phase

The quantitative second phase of this study enables the researcher to develop a level of understanding on the affect of the intervening variables. This phase will be achieved through a survey instrument to collect data on the affect of the intervening variables. There are two intervening variables. The first is the formal school required by all First Class Petty Officers in the Navy. The second intervening variable is the attribute tailored school provided only to the sample group of First Class Petty Officers aboard one U.S. Navy ship.

The questionnaire is designed to relate to the specific research questions. Quantitative data from these questionnaires will be utilized to provide an understanding of the intervening variables on organizational performance. The data will be triangulated by not only providing the questionnaire to the First Class Petty Officers, but also to their subordinates and supervisors.

Research Variables

The study design has three variables; the independent variable, intervening variable and dependent variable. The dependent variable is based on the performance of the First Class Petty Officer before being influenced by the intervening variable. By job description as a First Line Leader, their role is to lead their subordinates. Effective leaders should lead their subordinates to achieve the mission and metrics desired by the organization.

The intervening variable comes in two forms. First, leadership development is provided by Navy school houses. This training occurs off the ship and may have occurred before the First Class Petty Officers even arrived at their current ship assignment. Second, leadership development is provided at the ship. This leadership development is tailored to train on specific attributes deemed important during data collection from results of the survey provided to the focus group.

The dependent variable is this First Class Petty Officer's performance following the leadership development program. A survey was provided to the First Class Petty Officers and fellow ship mates. In the research design, the survey was provided as a cross section of the ship's population in a point in time. This is a cross sectional study. The survey was given to the participants approximately two months following the ship's leadership development program. The participants familiar with the work performance of the First Class Petty Officers should be aware of performance differentials before and after the implementation of the leadership development program. However, many of the study participants may not have been aware of the First Class Petty Officer's performance prior to taking the Navy school house leadership training that occurs off ship and may have occurred before they knew the individual. The most qualified individuals to provide value in assessing any change in the First Class Petty Officers during this Navy sponsored leadership development course are those that have known them prior to the training. Most likely, it will be the First Class Petty Officers themselves. In designing the survey, it will be important to gather information to help determine which data to include.

Target Population and Sampling

Target Population

It was impractical to conduct this analysis on all 280 ships active in the U.S. Navy. Therefore, a target population was selected to provide data representative of other ships in the Navy. Navy ships come in many sizes, from the 60 foot patrol craft with a crew of less than 50, to aircraft carriers over 1000 feet in length with a crew of over 3000.

The amphibious assault ship class, LHA (Landing Helicopter Assault) and LHD (Landing Helicopter Dock), was selected due to accessibility to the organization, its larger than average size (in order to provide a larger sample size), and the willingness to support the research. There were six of these LHAs and LHDs accessible to the researcher. Each of these ships has the same mission and approximately the same crew size of about 1000 sailors. Based on the ships' schedules, two were available. Of these two, one was randomly selected by a coin toss.

The LHA and LHD have the same mission, though the LHD is a newer class of ship that is better suited to carry the Landing Craft Air Cushion (LCAC) vehicle. LHAs and LHDs form the cornerstone of an Expeditionary Strike Group. In addition to carrying a Navy and Marine Corps staff, they carry 1600 Marines, 25 helicopters, six jets, LCACs or LCUs (Landing Craft Utility craft), and over 200 trucks, tanks and HMMWVs (High Mobility Multi-purpose wheeled vehicle). The mission of the LHA/LHD is to transport and support an amphibious assault of three battalions of Marines by surface and vertical (landing craft and helicopter) means (Navy Fact File, 2006).

All Navy sailors share the same assignment process at a centralized facility in Millington, TN. Each of the 280 Navy ships receive sailors from the same common pool

managed in Millington. Ship schedules, personal desires, timing, cost of moves, are but a few variables that enter into the assignment process. Theoretically, any sailor with the appropriate rating can be assigned to any ship. During their career, sailors will serve on many ships. The target ship has no restrictions on sailor assignments and requires sailors from 90 percent of all possible ratings for sailors that are assigned to ships. Therefore, the sailors that will make up the sample form an accurate representation of Navy sailors assigned to Navy ships as a whole.

Aboard the selected LHA there were 116 First Class Petty Officers that were provided the opportunity to participate in the tailored leadership development program. These First Class Petty Officers have about 45 Chief Petty Officers and 40 Officers that serve as their supervisors. There are roughly 800 sailors that work for these 116 First Class Petty Officers.

Sampling

During the qualitative phase, a focus group was selected by seeking volunteers from the pool of 45 Chief Petty Officers and 4 Department Heads that had once been Chief Petty Officers. A group of 5 to 10 individuals were sufficient in determining the contents of the tailored leadership development program provided aboard ship. The results of the focus group and corresponding development of the ship's leadership development program was then validated by other Department Heads, the Command Master Chief, Executive Officer and Commanding Officer. Once validated, the leadership development program was offered to all of the First Class Petty Officers. Participation in the ship's leadership development program was voluntary.

During the quantitative phase, all of the participants of the leadership development program were asked if they would volunteer to complete two surveys. Those that volunteered were provided one survey to elicit their views on the Navy's leadership development program. This survey was taken prior to the beginning of the ship's leadership development program. Names and department assigned were placed on yellow notes and stuck to the survey. The surveys were collected and placed in a folder to be handed back to the original respondent to complete the second part (back page) of the survey following participation in the ship's leadership development program. Approximately two months following completion of the ship's leadership development program the surveys were completed by the original participants and returned with the names removed. Supervisors were solicited for volunteers to complete the surveys following the same methodology used for the E-6s. Junior sailors (E-1 to E-5) were also solicited for volunteers to complete two surveys on their First Class Petty Officer. Those that volunteered followed the same methodology in survey completion as the supervisors. In all cases, the surveys were treated anonymously and voluntarily. The survey instrument provided was completed in a private classroom setting among other participants aboard the ship. A Senior Chief Petty Officer, not associated with this study, was asked to pass out the survey and collect the results protecting the anonymity of the sailors that participated in the survey.

Controlling bias in this voluntary survey was important to ensure the survey respondents were an accurate representation of the population. In the experimental design of this study, volunteer bias was controlled by ensuring the survey respondents represented the population of the ship by department breakdown. The monitoring Senior

Chief Petty Officer collected the first survey with the yellow sticky attached noted the department of the respondent. If an equitable distribution of volunteers was not evident, the Senior Chief Petty Officer was instructed to notify the ship's Executive Officer to solicit additional responses to rectify the imbalance. The Executive Officer did have to ask several departments a couple of times to arrange to have volunteers complete the survey. This request was more of a function of the ship's schedule impacting departments differently. In the end, there were survey respondents from all of the departments aboard ship and controlling sample bias was achieved.

Instrumentation

There were two instruments utilized in this research. The first was a survey provided to a focus group to determine the contents of a tailored leadership development program. The questions provided in Table 1 with background material are presented in Appendix A. The second instrument was a survey provided to the Leading Petty Officers that participated in the leadership development program as well as their supervisors, and select subordinates. Appendix B contains the complete surveys that were provided to the Leading Petty Officers, their supervisors, and subordinates. Data collected from those surveys are discussed in Tables 3 through 7.

The second survey addressed the research questions. The research questions addressed two intervening variables and three different audiences. "Parametric tests are more powerful because their data are derived from interval and ratio measurements" (Cooper & Schindler, 2003. p. 531). Therefore if the survey was designed to collect interval or ratio measurements, the analysis would be more robust. As discussed earlier, there are many metrics for organizational performance. The ship also has many metrics to

determine organizational performance. Each division or work center within the ship makes different contributions to the overall performance of the ship. Each sailor has an understanding of the mission of the ship that they learn from indoctrination briefs and participation in training and exercises as the ship practices its mission. Sailors were able to determine through their own observations and feedback from outside observers on the ability of their Work Center or Division to support the overall mission of the ship. To avoid having multiple surveys tailored to each work center, a generic survey was designed to normalize responses within each cohort group of participants. The survey instrument utilized for the quantitative phase of this study used a ten point scale that is widely accepted in analysis measuring the strength of peoples' views (Stewart, n.d.). The scale was coded as follows; 1 means the respondent believes there has been no improvement in the First Class Petty Officer's ability to improve the organization's performance. A score of 10 means the respondent believes there has been significant improvement in the First Class Petty Officer's ability to improve the organization's performance as evidenced by clear improvements in the organization's performance linked directly to a change in the way the First Class Petty Officer leads their organization. An assignment of a score from 2 through 9 is a scaled perspective of the respondents view on the First Class Petty Officer's ability to improve the organization's performance based on the training received where 2 represents lesser improvement and 9 represents a greater improvement. Code of 0 will be assigned to a response of "I don't know". It is important to remove any data where the participants clearly have no knowledge of the question to avoid biasing the results. A ten point scale has the added benefit due to the fact that most sailors have responded to questionnaires that use this

scale. The scale is an ordinal scale in the sense the relative values provide a degree of strength to the response. This provides more value than a simple yes or no response.

The questionnaires provided to First Class Petty Officers, the supervisors, and subordinates vary. This is necessary due to the different perspective each group has. Table 2 contains the questions that were provided for the First Class Petty Officers after

Table 2

Questionnaire for First Class Petty Officers prior to participating in the ship's attribute based leadership development program

1. Are you currently in a supervisory position?
2. How many people work for you?
3. How long ago did you take your last formal Navy leadership course (PLDP, ALDP)?
4. As a result of the formal Navy leadership course (PLDP, ALDP) you received, on a scale of 1 to 10, how much have you been able to improve the performance of your division or work center (1 is none, 2 is little, 10 is significant).
5. Provide examples of how you have improved your division or work center's performance based on this leadership development program.

they had taken the formal Navy leadership course(s) (PLDP and/or ALDP) but before they had taken the ship's attribute based leadership development course. Questions 1 through 3 are background questions, either yes/no or fill in the blank, to help determine validity of question 4. Question 4 is based on a 10 point scale on which the hypothesis was tested. Question 5 is a fill in the blank question used to help validate question 4.

Table 3 represents the questionnaire that was given to the First Class Petty Officers after taking the ship's attribute based leadership course. Questions 1 through 3

are background questions, either yes/no or fill in the blank. Question 4 is based on a 10 point scale on which the hypothesis was tested. Question 5 is a fill in the blank question asking for examples of how the ship's leadership development program improved performance in their division or work center. Details of this question were used to validate question 4. While questions 1 through 4 are redundant with table 4, the responses may change.

Table 3

Questionnaire for First Class Petty Officers following participation in the ship's attribute based leadership development program

1. Are you currently in a supervisory position?
2. How many people work for you?
3. How long ago did you take the ship's leadership development program course (if never, state n/a)?
4. As a result of the ship's leadership based course you received, on a scale of 1 to 10, how much have you been able to improve the performance of your division or work center (1 is none, 2 is low, 10 is significant).
5. Provide examples of how you have improved your division or work center's performance based on this leadership development program.

Table 4 contains the questions that were provided to the subordinates of the First Class Petty Officers prior to taking the ship's leadership development program. Question 1 is the question based on a ten point scale on which the hypothesis was be tested. Question 2 is a fill in the blank question asking for examples. Use of the examples helped validate question 1.

Table 4

Questionnaire for Sailors prior to their supervisor participating in the ship's attribute based leadership development program

1. On a scale of 1 to 10 (1 is none, 2 is low, 10 is significant), how well has your supervisor improved your division or work center's performance? State n.a. if you don't know.
2. Provide examples of how your supervisor has improved your division or work center's performance.

Table 5 contains the questions that were provided to the subordinates of the First Class Petty Officers after they had taken the ship's leadership development program. Question 1 is the question based on a ten point scale on which the hypothesis was tested. Question 2 is a fill in the blank question used to help validate question 1.

Table 5

Questionnaire for Sailors after their supervisor participated in the ship's attribute based leadership development program

1. On a scale of 1 to 10 (1 is none, 2 is low, 10 is significant), how well has your supervisor improved your division or work center's performance? State n.a. if you don't know.
2. Provide examples of how your supervisor has improved your division or work center's performance.

Table 6 contains questions that were provided to the supervisors of the First Class Petty Officers prior to taking the ship's leadership development program. Question 1 is based on a ten point scale on which the hypothesis was tested. Questions 2 and 3 are fill in the blank questions used in validating Question 1.

Table 6

Questionnaire for Officers and Chief Petty Officers prior to their First Class Petty Officers having participated in the ship's attribute based leadership development program

1. On a scale of 1 to 10 (1 is none, 2 is low, 10 is significant), how well have the First Class Petty Officers that work for you improved your division or work center's performance? State n.a. if you don't know.
2. Provide examples of how the First Class Petty Officers have improved their division or work center's performance.
3. How long ago did they receive the formal Navy leadership training (PLDP, ALDP)?

Table 7 contains questions that were provided to the supervisors of the First Class Petty Officers after they had taken the ship's leadership development program. Question 1 is the question based on a ten point scale on which the hypothesis was tested. Questions 2 and 3 are fill in the blank questions used to help validate question 1.

Table 7

Questionnaire for Officers and Chief Petty Officers after their First Class Petty Officers participated in the ship's attribute based leadership development program

1. On a scale of 1 to 10 (1 is none, 2 is low, 10 is significant), how well have the First Class Petty Officers that work for you improved your division or work center's performance based on the ship's leadership development course? State n.a. if you don't know.
2. Provide examples of how the First Class Petty Officers have improved their division or work center's performance based on this course.
3. How long ago did they participate in the ship's leadership development course?

Validity and Reliability

Several methods are incorporated into the research design to ensure validity and reliability of the study. Triangulation of the survey instruments helps validate the questions posed in addition to the reliability of the responses. For example, the results of the focus group that determine what type of attributes should be taught in the ship's leadership development course was provided to other Department Heads, the ship's Command Master Chief, Executive Officer and Commanding Officer for their views. Additionally, the survey results were compared to other studies that have looked at desired attributes for leaders in the Navy.

The composition of the questions for the survey used to gather data to test the hypothesis were vetted through experts from the Center for Naval Leadership to determine if these questions were appropriate. Additionally, the survey itself has additional questions that will not be used in data analysis but will help check the reliability of the data. For example, several of the questions ask for the responder to provide examples. The examples can be checked against known performance metrics to determine the validity of the response. Also, the respondent can select "don't know" as an answer. The survey will also be triangulated by providing the same line of questioning to different groups to look for similarities in the responses.

Data Analysis

This study includes both quantitative and qualitative data. The qualitative data was collected using surveys for two purposes. First, a focus group used a qualitative survey to determine those skills that were desired to be included in the organizations leadership development program. This data was then used in the development of the

curricula for the ship's in-house attribute based leadership development program. Second, other surveys were used in the 360 degree assessments contained qualitative data used to validate the quantitative responses on those surveys.

The quantitative data used in this study was collected using six survey instruments in the form of a 360 degree assessment. The quantitative data was coded from one of ten values using a ten point scale. The value of n.a. (not applicable) is assigned to the response "Don't know" to assist the researcher in removing erroneous data. Values 1 through 10 were assigned weighted responses where 1 no improvement, 2 reflects a minimal level of improvement and ten reflects a very high level of improvement. Values two through nine reflect incremental improvements along this scale. This data is considered ordinal data since there is unequal intervals between responses. Though data from this ten point scale is ordinal, "some behavior scientists argue that parametric tests are usually acceptable for ordinal data" (Cooper & Schlinder, 2003, p. 226).

The purpose of the quantitative data collected is to test the various null hypotheses presented earlier. The null hypotheses fall into two categories. Hypotheses one through six addresses an issue that is best answered by a yes or know response. The survey instrument was designed to capture not only a yes/no response but if the answer was yes to what degree was there an improvement in organization performance based on the leadership training program. The ordinal responses on the surveys were vital to supplying the data needed to support null hypotheses seven and eight that investigated if one program offered a degree of improvement over the other program. To test the null hypotheses one through six, the ordinal data on a scale of one to ten had to be coded into yes/no data where response one (there is no improvement in the organizations

performance) was coded to no and responses two through ten (which all provided an ordinal ranking of improved organizational performance) were coded yes. Following this coding, null hypotheses one through six was tested with data that followed a binomial (yes/no) distribution. The data which comes from a population with unknown mean, was compared to the expected mean of 0.5 if the null hypotheses were to be accepted. The resulting binomial statistical test was conducted to a 0.05 level of significance. In testing hypotheses seven and eight, the data was compared to a population with an unknown mean and variance. A t-test was used to determine the statistical significance between the sample distribution mean and the population whose standard deviation is unknown. T-tests are commonly conducted on normal distributions in testing if the sample data represents a true difference or if that difference could fall within the variance of the general population. While data from a ten point based survey does not truly represent a normal distribution since the data is not continuous but has discrete values from 1 to 10, a test for normality was conducted to determine if the t-test was appropriate. The data that did not meet the normal distribution criteria used a non-parametric test to accept or reject the null hypotheses. Though less powerful than a parametric t-test, a nonparametric test can still provide a test of significance between the observed distribution of the data and the expected distribution based on the null hypothesis. The level of significance was set at the conventional level of $p<0.05$ to test the null hypotheses.

Summary

Building the framework for a study design is much like making a large painting. The artist must simultaneously maintain the larger picture of what is to be achieved with the details of each brush stoke necessary to bring the picture to life. The artist constantly

shifts between viewpoints; often refining each until the final brushstroke matches the image the artist intended.

The study design is not a stagnant process. It is refined iteratively with the steps along the way as more information is learned on the subject. Building from a theoretical perspective, the researcher selects the strategies of inquiry and methodology, and then collects data and tests theories until the researcher is satisfied the job is done.

The most appropriate study design, whether it is a qualitative, quantitative, or mixed approach study becomes more an extension of the study design than any other factor. The framework proposed by this study included providing a treatment condition by specialized leadership development on first line supervisors, setting up test conditions, and data collection. This study's research design is a mixed method that includes a qualitative and quantitative phase. The qualitative phase was used to determine those variables that were included in the organizations leadership development program that could potentially have an impact on the organizations performance. The ship's in-house leadership development program as well as the Navy's schoolhouse leadership development programs were then tested using a quantitative approach to determine the significance of these programs to the organizations performance.

CHAPTER 4. DATA ANALYSIS AND RESULTS

Introduction

Data was collected from a U.S. Navy amphibious assault ship on the impact of two separate leadership development programs on organizational performance. The study framework implemented a mixed methods approach using qualitative and quantitative analysis in obtaining the data necessary to test eight hypotheses. The crew compliment of this amphibious ship during the time of the study was 1087 men and women from which the data was collected. Table 8 provides the demographics of the ship by paygrade.

Table 8

Ship Demographics by Paygrade

Paygrade	Number in Category
Chief Petty Officers and Officers E7 to E9, W2 to W4, and O1 to O6	97
First Class Petty Officers E6	116
All other sailors E1-E5	874

The target population for the leadership development program was the First Class Petty Officer (E-6). All of 116 E-6s were required to take some level of formalized leadership development provided by the Navy as a condition of their promotion to E-6. All of the E-6s were allowed to take the ship's leadership development program during normal working hours. There was 94% participation (109 of the 116) in the ships program. Participation in the ships program was high due to it being offered during

normal working hours and the perception the program would be assisting in skills development viewed as essential to the job. The reason some of the First Class Petty Officers did not participate was contributed to vacation time or conflicts with other required formalized schools that could not be rescheduled. Surveys were developed to quantify the impact of the Navy's and the ship's leadership development programs. The ship's population was stratified into three cohort groups to provide a 360 degree assessment. The first cohort group was the supervisors of the First Class Petty Officers, the second group was from the peer cohort, and the last cohort group was from subordinates of the First Class Petty Officers in paygrades E-1 to E-5. Participation in the study surveys was voluntary. Table 9 shows the size of the samples and percent of participation relative to the ship population.

Table 9

Ship Survey Participation

Paygrade	Number of Survey Participants	Percent Survey Participation
Chief Petty Officers and Officers E7 to E9, W2 to W4, and O1 to O6	26	27%
First Class Petty Officers E6	32	28%
All other sailors E1-E5	50	6%

The survey participation of the supervisor and peer cohort groups is consistent with the 20% participation of similarly based self-administered questionnaires according to Cooper and Schindler (2003). The 6% participation of the subordinate cohort group is

below the norm for this type of survey. However, given the large number of the population and the number of survey participants, there is sufficient data to conduct statistical analysis. The low participation of this cohort group can be explained by several factors including age and maturity (most in this group are 18 to 22 years old), time on board the ship (25% will have been onboard for nine months or less), and newness to the Navy in general. Over 90% of this cohort group has been in the Navy less than four years.

Findings and Results

Findings and results of the study developed in two phases. The first set of findings were a result of the survey provided to the focus group in determining what attributes or skills would be important to develop in their First Class Petty Officers. From these findings the ship created a leadership development program. Appendix F provides a breakdown of those skills viewed as important to develop by the organization's leadership. The ship chose to name their leadership development program the LPO Academy. The agenda for the LPO Academy can be found in Appendix G. The second set of findings came as a result of a set of 360 degree surveys presented to the supervisor cohort group, peer cohort group and subordinate cohort group. Statistical tests were conducted on the qualitative data obtained from these surveys.

Observations identifying the characteristics of the qualitative data obtained from the 360 degree surveys are presented in the Data Analysis section of this chapter. Specific findings and results obtained during the data analysis are presented during different sections of the Summary of Findings of this chapter. The results of each hypothesis tested will also appear in applicable sections of the Summary of Findings.

Data Analysis

The data from each survey underwent a series of statistical tests in determining the studies findings. The statistical tests were conducted using a computer software package called Statistical Package for the Social Sciences version 14 (SPSS). Descriptive statistics, visual inspection of histograms, and the Kolmogorov-Smirnov test for normalcy were conducted on the data using SPSS from each cohort group.

Descriptive statistics from each of the six surveys is listed in table 10.The row E1-5 Navy represents data from the survey soliciting responses from the ships E-1 to E-5

Table 10

Descriptive Statistics from the 360 Degree Surveys

	N	Minimum	Maximum	Mean	Std. Deviation
E1-5 NAVY	50	1.00	10.00	4.4000	3.45230
E1-5 SHIP	50	1.00	10.00	6.3800	2.70215
E6 NAVY	32	1.00	10.00	5.2813	2.34499
E6 SHIP	32	1.00	10.00	6.5938	2.12298
Khaki NAVY	26	1.00	10.00	4.2308	3.10236
Khaki SHIP	26	1.00	10.00	4.9231	2.72651

paygrade on the level of improvement of their organization based on their supervising E-6 taking the Navy's leadership development programs. The row E1-E5 Ship represents data from the survey soliciting responses from the ships E-1 to E-5 paygrade on the level of improvement of their organization based on their supervising E-6 taking the ships leadership development program (LPO Academy). The row E6 Navy represents their response on how well they believe the performance of their organization improved based on their participation in the Navy's leadership development programs. The row E6 Ship

represents their response on how well they believe the performance of their organization improved based on their participation in the ship's LPO Academy. The row Khaki Navy is based on CPO and Officer's participation in the survey evaluating their subordinate E-6 improving their organizations performance contributed to the Navy's leadership development program. Likewise the row Khaki Ship is based on CPO and Officer's participation in the survey evaluating their subordinate E6 improving their organizations performance contributed to the ship's LPO Academy. The sample size is depicted in column N. All six of the surveys covered the range from one to ten of the questionnaire responses. The means from each sample are depicted in the Mean column as well as the minimum value, maximum value and standard deviation.

Figure 5 provides a boxplot from each of the six 360 degree surveys. Observation of the boxplots depicts each survey's range of responses is from one to ten. The red box represents the interquartile range. The bold horizontal line in each box represents the mean from each survey. The surveys should be compared by pairs. The first pair represents the E-1 to E-5 responses to the surveys. An overlap in the interquartile ranges is depicted as well as a difference in the mean comparing the Navy's leadership development program with the ship's LPO Academy. The second pair represents response from the E-6s. Again, an overlap of the interquartile ranges can be observed as well as an increase in means. The last pair represents responses of the Khaki leadership. This pair depicts the greatest overlap of interquartile ranges but still shows a higher average response for the ship's LPO Academy.

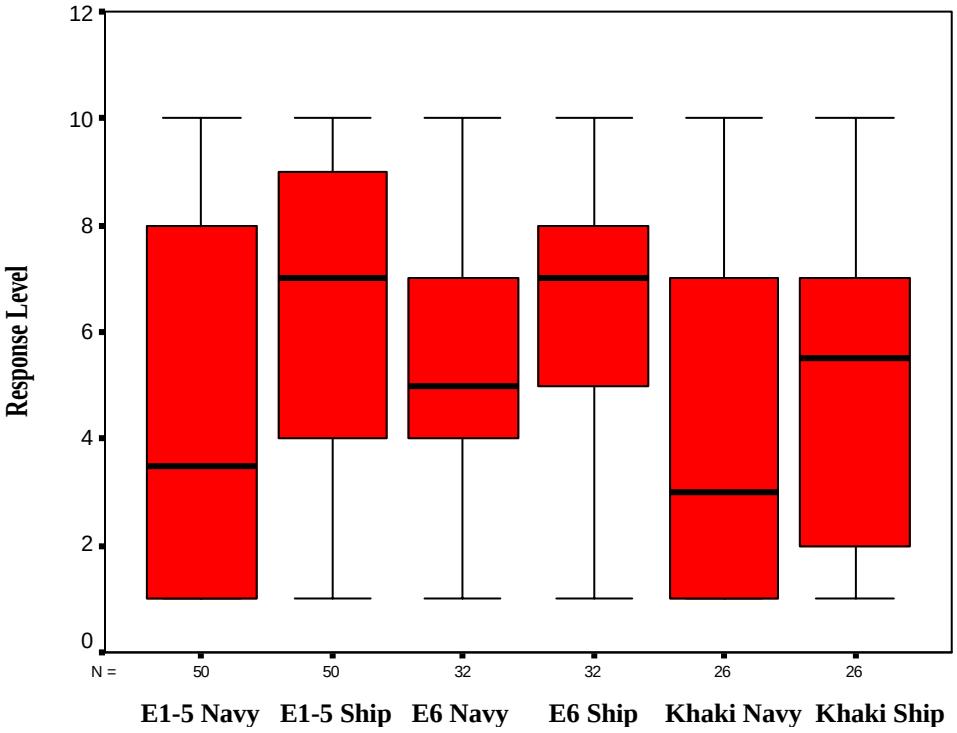

Figure 5. Box plot of 360 degree surveys.

Table 11 represents the results of applying a binomial distribution test to the 360 degree survey data. As discussed in Chapter 3, the data supporting the first six hypotheses to be tested was coded into yes/no responses to determine if either of the leadership development programs the E-6s participated in contributed to improving the organizations performance.

The rows represent data from each of the six surveys. Each survey was coded where a response of 1 (no improvement in the organizations performance based on the E-6 participating in a leadership development program) meant no and a response of two through ten (differing levels of improvement in the organizations performance were noted) meant yes. There were 50 E-1s to E-5s surveys with 31 yes's and 19 no's for the

Navy's leadership development program and 48 yes's and 2 no's for the ship's LPO Academy. Similar results can be observed for the E-6 and Khaki surveys. The expected number of yes/no responses if the null hypotheses were to be accepted would be 50% yes's and 50% no's, meaning there is no difference in the organizations performance

Table 11

Binomial Distribution Analysis of 360 Degree Surveys

		Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
E1-E5 Navy	Group 1	Yes	31	.62	.50	.119(a)
	Group 2	No	19	.38		
	Total		50	1.00		
E1-E5 Ship	Group 1	Yes	48	.96	.50	.000(a)
	Group 2	No	2	.04		
	Total		50	1.00		
E6 Navy	Group 1	Yes	28	.88	.50	.000(a)
	Group 2	No	4	.13		
	Total		32	1.00		
E6 Ship	Group 1	Yes	30	.94	.50	.000(a)
	Group 2	No	2	.06		
	Total		32	1.00		
Khaki Navy	Group 1	Yes	20	.77	.50	.009(a)
	Group 2	No	6	.23		
	Total		26	1.00		
Khaki Ship	Group 1	Yes	23	.88	.50	.000(a)
	Group 2	No	3	.12		
	Total		26	1.00		

Note. a. based on Z approximation.

based on the E-6 participating in a leadership development program. As stated earlier, the statistical significance was set at the conventional $p<0.05$. This means that using the binomial test, the null hypotheses would be rejected if the significance level of a two tailed test has a p value of less than 0.05. As observed in the last column of table 11, only the first survey was not rejected (p of $0.119 > 0.05$). This was the survey provided by the

E-1 to E-5s evaluating if the Navy's leadership development program improved their supervising E-6 ability to improve their organizations performance. The other five null hypotheses were rejected implying that the five original hypotheses are accepted to a confidence level of 95%.

Table 12 depicts the results of the one sample Kolmogorov-Smirnov test used to determine if the data represented a sample that could have come from a population that was normally distributed. If the data came from a normally distributed population a parametric t-test could be conducted testing if the mean and variance of the sample data accurately represented the population mean and variance. If this were the case, the means could be tested to determine if the higher scores for the LPO Academy over the Navy's leadership development program was statistically significant.

Table 12

One Sample Kolmogorov-Smirnov Test of 360 Degree Survey Data

		E1 E5 Navy	E1 E5 Ship	E6 Navy	E6 Ship	Khaki Navy	Khaki Ship
N		50	50	32	32	26	26
Normal Parameters	Mean	4.400	6.380	5.283	6.594	4.231	4.923
	Std. Deviation	3.452	2.702	2.345	2.123	3.102	2.727
Most Extreme Differences	Absolute	.218	.146	.136	.232	.193	.154
	Positive	.218	.095	.110	.160	.193	.144
	Negative	-.162	-.146	-.136	-.232	-.149	-.154
Kolmogorov-Smirnov Z		1.539	1.029	.770	1.313	.982	.783
Asymp. Sig. (2-tailed)		.018	.240	.593	.064	.289	.572

Note. Test distribution is Normal.

The six columns represent data from the six 360 degree surveys. N represents the sample size (number of surveys) in each category. Mean, standard deviation as well as the

Kolmogorov-Smirnov Z value were computed using the computer software. The important numbers in this table can be found in the last row depicting the p value (Asymp. Sig) of this two tailed test. If $p<0.05$ then the underlying data can be assumed to come from a normally distributed population with 95% confidence. Observation of table 12 depicted that only the data from the E-1 to E-5 Surveys assessing the Navy's leadership development program did not appear to come from an underlying normally distributed population.

Figure 6 depicts a histogram of the data from the E-1 to E-5 survey assessing the Navy's leadership development program. A histogram of a normally distributed data would take the appearance similar to a bell shaped curve. Observation of Figure 6 depicts the data skewed to the left indicating the respondents did not know or did not see a difference due to the leadership development program.

H_{7o} and H_{8o} test the assumption that the ship's LPO academy scored higher than the Navy's leadership development program in providing the necessary capability to E-6s to improve their organizations performance from the perspective of the E-6s and their Khaki supervisors. A hypothesis testing if the E1 to E5 cohort group observed the same difference was purposely omitted. As discussed earlier, the E-1 to E-5 cohort group would be less in tune with leadership development programs their supervisors had taken off the ship. In many cases, because of the high turnover rate of the junior sailors, the leadership programs most likely would have occurred before they arrived on the ship.

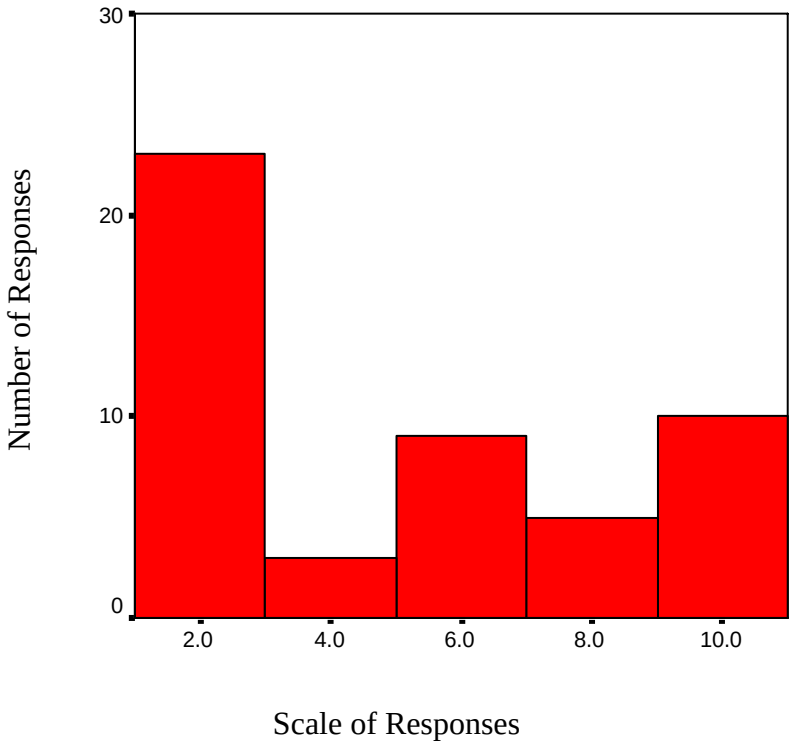

Figure 6. Histogram of E1-E5 surveys of Navy's leadership development program.

Note. Standard deviation = 3.45, mean = 4.4, n=50.

While observation of the subordinates of their supervisor's performance participating in a leadership development program aboard ship was relevant, an assessment of how their supervisors benefited from such a program off ship at an earlier time was more suspect. The data from the E-1 to E-5 survey evaluating their E-6 supervisor's improvement based on the Navy's leadership development program had by far a much larger percent of noting no improvement than the other 5 surveys. The result of not rejecting H_{1o} (In the view of subordinates, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship.) when the other five null hypotheses were rejected adds further support that

the data in this survey is suspect. The E-1 to E-5 survey evaluating their E-6 supervisor's improvement based on the ship's leadership development program was more credible based on first hand knowledge. Given there was not a credible basis for comparison, not testing a null hypothesis comparing the ship's LPO Academy with the Navy's leadership development program among the E-1 to E-5 paygrades was appropriate.

Testing H_{7o} and H_{8o} from the perspective of the E6 and Khaki cohort groups can be conducted using a parametric t-test given the populations normal distribution. Since each of the null hypotheses test if the ships leadership development program is better than the Navy's program (as opposed to not equal to the other) a one tailed test of significance is appropriate. Recalling the E-6 results from table 10 depicts that on average, the E-6 cohort group rated that the ship's LPO Academy provided them with the skills and capability to improve their organizations performance by 6.59 on average while the Navy's leadership development programs made less of a contribution to them improving their organizations performance with an average of 5.28. The SPSS computer program was used to determine if these differences were statistically significant. Table 13 provides a summary of this analysis.

Both sets of data from the E-6 surveys can be assumed to be drawn from a population that was normally distributed. While the means were known to be different, equal variances cannot be assumed. Knowing if variances are equal is relevant in determining the appropriate p value to use. The convention was to use a $p<0.05$ to reject a null hypothesis for a two tailed test. The convention for 95% confidence in rejecting a null hypothesis for a one tailed test would be a $p/2<0.05$.

Table 13

Independent t-test analysis of the E6 leadership development programs (Navy vs. Ship)

	Levene's Test for Equality of Variances		t-test for Equality of Means						
E6 Surveys	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.213	.646	-2.347	62	.022	-1.3125	.559	-2.430	-.195
Equal variances not assumed			-2.347	61.40	.022	-1.3125	.559	-2.430	-.195

Table 13 provides analysis for comparison assuming equal variances and not equal variances. The Levene's test for equality tests the hypothesis that the variances of both groups are equal and for a value of <0.05 that hypothesis is false. . In the case of the E6 data from both surveys, a Levene's test with a significance of 0.646 which is greater than 0.05, we can be confident that the variances are assumed to be equal. Therefore, the top row of table 15 should be used in testing H_{7o}. H_{7o} is rejected (in a one tailed test) if the significance column under t-test (table value divided by 2) is less than 0.05. Since table 13 depicts a significance of 0.022 then p/2 is 0.011 which is less than 0.05 and the null hypothesis is rejected. Thus the alternative hypothesis H_7 (In the view of peers, the ship's attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship better than the Navy school house leadership development programs.) is accepted.

The E-6 surveys also contained another source of data. Each survey contained two parts, side one and side two. Side one was completed prior to the E-6 enrolling in the

ships leadership development program and permitted the respondent to rate the level of improvement based on the Navy's leadership development program. Sixty days following the completion of the ship's leadership development program, the respondent completed side two of the survey asking the same questions about the ship's leadership development program. By comparing the responses to question four of the two surveys, data can be compared between the two responses to determine if a greater improvement was noted in one program over the other.

Question four of side one of the survey stated "As a result of the formal Navy leadership course you received, on a scale of 1 to 10, how much have you been able to improve the performance of your division or work center (1 is none, 2 is little, 10 is significant)". Question four of side two of the survey stated "As a result of the ship's leadership based course you received, on a scale of 1 to 10, how much have you been able to improve the performance of your division or work center (1 is none, 2 is low, 10 is significant)". By comparing the ordinal value of the two questions pertaining to two independent leadership development programs, a determination can be made of one program enabled the First Class Petty Officer more than the other at improving the organizations performance.

A review of the E-6 Survey Summary in Appendix H indicates 18 of the 32 respondents indicted that as a result of the ship's leadership development course the organizations performance improved more than the Navy's leadership development course. Conversely, 14 of the 32 respondents did not indicate that difference. Table 14 depicts the results of a binomial test assuming there is no difference between the two different leadership development programs and a hypothesized value of 50%.

Table 14

Binomial test of E6 surveys (Navy vs. ship)

		Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
E6 Compare	Group 1	Yes	18	.56	.50	.597(a)
	Group 2	No	14	.44		
	Total		32	1.00		

Note. a. based on Z approximation.

The significance level of 0.597 is not less than 0.05. Therefore there is no statistical difference between the two surveys in determining if one program was better than the other. These results contradict the t-test results in table 13. Both tests approach the question (is the ship's LPO Academy better than the Navy's leadership development program) from a different perspective. The t-test results indicate the answer is yes by measuring the quantity of the response to the question in the survey. This test captures a magnitude perspective. The binomial test in Table 14 implies there is no statistical difference between the two programs by counting yes/no votes with one vote to a person. This test captures a polling perspective. Stated another way, the group was split about 50/50 if one program was better than another but those that did believe the ship's program was better believed so more strongly than the group that believed there was no difference between the two programs.

The same procedures were applied in testing H_{8o} (In the view of supervisors, the ship's attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship better than the Navy school

house leadership development programs.). Table 15 provides a summary of the analysis from testing the data from the two surveys provided by the khaki supervisors.

Levene's test to determine equality of variances indicted the significance level of 0.499 was greater than the 0.05 threshold implying the variances are equal between the two sample data sets for the Khaki supervisors. Using analysis from the upper row in table 15, the t-test for H_{8o} provides a significance level of 0.397. A one tailed test is preferred over a two tailed test since H_{8o} is framed around the LPO academy improving

Table 15

Independent t-test analysis of the Khaki leadership development programs (Navy vs. ship)

	Levene's Test for Equality of Variances		t-test for Equality of Means						
Khaki Surveys	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.463	.499	-.855	50	.397	-.6923	.810	-2.32	.935
Equal variances not assumed			-.855	49.2	.397	-.6923	.810	-2.32	.935

performance more than the Navy's leadership development program. Using this test, H_{8o} should be rejected if $p/2 < 0.05$. However, 0.199 (0.397/2) is not less than 0.05, therefore H_{8o} cannot be rejected and H_8 cannot be accepted at the 95% confidence level. The confidence level would have to be lowered to 80% before H_{8o} can be accepted (where $p/2 < 0.20$ or $0.199<0.20$).

Visual inspection of the boxplots in figure 5 shows differences in the means (4.9 for the LPO Academy and 4.2 for the Navy's leadership development program). However, the red boxed interquartile ranges almost entirely overlap supporting the analysis that statistically we are less confident that the differences between those means are due to the treatment of the variable than due to statistical variation.

A binomial test was applied to the khaki supervisor responses using the same methodology that was used in the E6 questionnaires. Of this group of 26 respondents, 11 stated the ship's LPO academy was better than the Navy's leadership based program while 15 stated there was no difference or the Navy's program was better than the ships. Table 16 depicts the results of the khaki supervisor binomial test.

Table 16

Binomial test of Khaki surveys (Navy vs. ship)

		Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (2-tailed)
Khaki Compare	Group 1	No	15	.58	.50	.557(a)
	Group 2	Yes	11	.42		
	Total		26	1.00		

Note. a. based on Z approximation.

The significance level of 0.557 is not less than 0.05. Therefore there is no statistical difference between the two surveys in determining if one program is better than another. In this data set the results are consistent with the t-test in table 15. In reviewing the results of the khaki supervisor surveys there is inconclusive evidence to indicate the

ship's LPO academy is better at improving the organizations performance through the E-6 Petty Officers than the Navy's leadership development program.

Triangulation of Results

The data collected was validated using a number of different approaches. Use of subject matter experts for additional perspectives, cross checking against other studies and programs, and comparing qualitative examples against quantitative answers on surveys were employed in triangulating the results of this study.

First, in the establishment of the ship's leadership development program the skill sets chosen by the focus group survey was provided to several subject matter experts, the Command Master Chief, other Department Heads, the Executive Officer, and Commanding Officer for review and comment. They agreed with the recommendations of the focus group. The ship then created their leadership development program which they named the LPO Academy. Once the curriculum for the LPO Academy was developed, it was checked against a benchmark study the Navy conducted in identifying those attributes demonstrated by outstanding CPOs in organizations that had been recognized to be top performers (Bozeman, 1987). The LPO Academy covered all of the same topics though the instructional material was centered on a more hands on approach that dealt with ongoing projects aboard ship. The LPO Academy also emulated several programs identified in the case studies in chapter 2. Sage Publications (used live projects), 3M and GE (heavy participation in the program by the organizations senior leadership) had a proven track record for success. Triangulation from a variety of sources validated the ship's leadership development program as a viable test instrument.

Second, the data collected from the surveys that was used in the quantitative phase of this study was validated by a variety of methods. Each survey contained a question allowing the respondent to provide examples supporting the quantitative marks they placed on the survey. In cases where the respondent indicated the leadership development program empowered the E-6 to improve the organizations performance, the question asking for examples was checked. In 64 of the 93 responses (69%) that indicated there had been some improvement to the organizations performance specific examples were provided. In every case, those examples matched material that had been part of the leadership development program.

In testing the first six null hypotheses, the analysis was conclusive. Comparing descriptive elements of the data as well as using statistical tests all correlated to the same conclusions. Both leadership development programs contributed to improving the organizations performance. Triangulation of varying statistical methods validated the test results.

The last two null hypotheses (H_{7o} and H_{8o}) were also approached using descriptive statistics as well as two different statistical approaches, t-test and binomial test. Each statistical test took a different perspective. The t-test quantified the level of improvement between the two different leadership development programs while the binomial test used a polling method to determine the number of respondents preferring one leadership development program over the other. While the analysis was less conclusive (3 of the 4 tests stated there was no difference between the two leadership development programs), triangulation of research through several approaches improved the validity of the findings.

Summary of Findings

A summary of the null hypotheses is as follows:

1. H_{1o} In the view of subordinates, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship. Accepted though data may be suspect.

2. H_{2o} In the view of subordinates, attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship. Rejected.

3. H_{3o} In the view of peers, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship. Rejected.

4. H_{4o} In the view of peers, attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship. Rejected.

5. H_{5o} In the view of supervisors, leadership development at Navy school houses for First Class Petty Officers does not improve organizational performance aboard a Navy ship. Rejected.

6. H_{6o} In the view of supervisors, attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship. Rejected.

7. H_{7o} In the view of peers, the ship's attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship better than the Navy school house leadership development programs. Rejected during t-test and accepted during binomial test.

8. H_{8o} In the view of supervisors, the ship's attribute based leadership development for First Class Petty Officers does not improve organizational performance aboard a Navy ship better than the Navy school house leadership development programs. Accepted both t-test and binomial test.

As a consequence of accepting or rejecting the null hypotheses the affect on the alternative hypotheses is as follows:

1. H_1 In the view of subordinates, leadership development in Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship. Do not accept.

2. H_2 In the view of subordinates, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

3. H_3 In the view of peers, leadership development at Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

4. H_4 In the view of peers, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

5. H_5 In the view of supervisors, leadership development at Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

6. H_6 In the view of supervisors, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

7. H_7 In the view of peers, the ship's attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship better than the Navy school house leadership development programs. Accept, though with less certainty (binomial test concludes no difference).

8. H_8 In the view of supervisors, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship better than the Navy school house leadership development programs. Do not accept at 95% confidence though the hypothesis can be accepted at 80% confidence.

From all of the statistical analysis it is clear that both the Navy's leadership development program and the ship's LPO Academy empowered E-6 Petty Officers aboard one Navy ship to improve their organizations performance in the eyes of subordinates, peers, and supervisors. This analysis is supported by similar findings during the literature review and case studies. The analysis in this study looked at leadership development applied to a supervisor much closer to the actual work force than previous studies that looked at more senior leaders in an organization. While both programs benefit first line leaders, it is less clear if one program is superior to the other at

improving an organizations performance. Statistically there is less confidence (95% confidence among peers, 80% confidence among supervisors) among peers and supervisors that the ship's LPO Academy provided skills that improved organizational performance more than the Navy's leadership development program.

These findings are limited by the experimental design of this study. The independent variable was the skills of the E-6 Petty Officers in their ability to improve their organizations performance. There were two intervening variables, the Navy's leadership development program and the ship's LPO Academy. Treatment of the independent variable by the intervening variables was conducted differently and beyond the control of the researcher. The first intervening variable, participation of the Navy's leadership development program, was applied before this study began. Measurement of the ability of the E-6 to improve their organizations performance occurred following the treatment to the E-6 and provided a quantifiable measure.

Treatment of the second intervening variable, participation of the Navy's leadership development program, occurred following the E-6's participation in the Navy's programs. When the survey instrument was used to collect data on the E-6s ability to improve the organizations performance it measured the additive improvement in skills, some of which had already been applied by participation in the Navy's leadership development program.

Initially, the skills obtained in the two different leadership development programs were believed to be mutually exclusive and should not have been a problem. However, after reviewing some of the comments provided on the qualitative portion of the questionnaire by peers and supervisors it became evident that some of the skill

development applied during the ship's LPO academy were merely reinforcing skills that had been acquired earlier.

Another aspect of this study that influenced the statistical output was each of the E6s that participated in the study was not equal. They each had different aptitudes, different ages, time in service, time in paygrade, and personal motivation. There were several surveys that indicated that the leadership development program did not have an impact on the E6. Some surveys sited the individual was limited in ability or motivation. Other surveys did not comment so it was unclear how to categorize the affects of the treatment as a shortcoming of the treatment or a shortcoming of the individual.

Based on the material above, there were a number of non-quantifiable findings in this study that were gleaned from the comments provided on the surveys and supported by numerical ratings also provided on the surveys. These findings are as follows:

1. Unequal application of the two treatments may have biased some responses in the surveys.

2. Personal limitations of some of the E6s may have biased some of the responses in the survey. As a result, the affect of leadership development programs on organizational performance may in some part be limited by personal ability and motivation.

3. Personal limitations of some of the survey respondents may have biased some of the survey responses. It was assumed each survey respondent had equal familiarity of the abilities and execution of the duties of the E6 evaluated.

Chapter 5 presents more detail on recommendations based on findings in this chapter as well as future areas of study.

CHAPTER 5. CONCLUSIONS AND RECOMMENDATIONS

Introduction

The Chief of Naval Operations (CNO) who is the senior Admiral in the U. S. Navy is responsible for training and equipping the Navy to meet the global requirements of the geographic Combatant Commanders. The current CNO, Admiral Mike Mullen, has made leadership development one of his top three priorities. Capable leaders are believed to make the Navy more effective. As a result of the CNO's guidance, the Navy has instituted leadership development programs targeting all ranks.

Most of the leadership development programs target the senior (by rank) ten percent of the Navy. Formalized leadership development programs designed for first line supervisors (First Class Petty officers of the paygrade E6) are limited to three classroom based programs over their entire career. Much of the leadership skills expected of first line supervisors are learned through non-formal means such as observation of superiors, trial and error on the job, and feedback from superiors. This study looked at the ability of the Navy's formal leadership development program and a tailored in-house leadership development program applied to a First Class Petty Officer's ability to improve the organization's effectiveness through the perspective of supervisors, peers, and subordinates. The in-house leadership development program was called the LPO (Leading Petty Officer) Academy.

Using qualitative and quantitative methods, this study tested two different types of leadership development programs aboard a U. S. Navy ship. The degree of correlation of these programs, as applied to the ship's First Class Petty Officers, was measured to determine the relation of leadership development and any improvement in the

organization's effectiveness. In essence, does the Navy's formal leadership development program answer the CNO's call to develop leaders that improve the organization's effectiveness? Based on research of different leadership development programs that occur in both the private sector and other military institutions, can a tailored leadership development program designed for shipboard use, improve the ship's effectiveness? Is one program better than the other?

Study Summary

Much research has been conducted on the value of leadership development in organizations. Most of this research targets senior leaders in an organization. Only in the last few years did the literature review reveal studies that showed correlations between leadership development programs of top level management in an organization and improvements in that organization's bottom line. Only a few studies looked at leadership development and organizational performance in the military. Those studies focused entirely on the Officer corps. The literature review did not find any studies that focused on leadership development of first line leaders in the military, those closest to the individuals that conduct the bulk of the work in the military, and its impact on the organization's bottom line. This study addressed that niche of leaders and the impact of a leadership development program on the organization's performance.

One ship with a crew size of over 1000 sailors was randomly selected for this study. The large crew size of this ship was ideal in providing sufficient respondents for both the surveys and the population base for the LPO Academy. The large crew size and diverse missions of this ship also ensured that the shipboard systems and sailor skills found aboard this ship represent over 95% of the skills found aboard all other ships in the

U.S. Navy. The Navy's manpower assignment process also ensured that sailors beyond their first assignment came from the general sailor population. As a result, this ship provided a good representative sample of a ship and sailors that can be found in the U. S. Navy.

Two leadership development programs were evaluated. The Navy has a formal leadership development program that includes an off ship classroom based format that is required at specific intervals in a sailors career. The first two leadership development courses are required before the sailor is promoted to the rank of E-6 or First Class Petty Officer. Sailors can be selected to the paygrade of E-6 in as little as six years, but eight to ten years is more typical. Many sailors complete their twenty year career not being promoted past the paygrade of E6 since selection to the next paygrade of E7 is very competitive. The third formal leadership development course the Navy offers is when sailors achieve the rank of First Class Petty Officer and is required prior to selection to the next paygrade. The material presented during these programs is more theory based and covers a broad range of topics from different types of leadership to counseling skills.

The second leadership development program evaluated was based on results from a focus group that consisted of supervisors of the First Class Petty Officers. The goal of the focus group was to identify those skills they believed a Leading Petty Officer (LPO) in their organization should have that contribute directly to the performance of their organization. The focus group developed an outline for a ship based leadership development program tailored to improve the skills and capabilities required to make their organization more successful. Once the Commanding Officer of the ship approved the program, hand selected supervisors developed and taught the material for this

program and mentored the First Class Petty Officers in applying those skills in their organization.

Measuring an organization's bottom line in the private sector is usually equated to some fiscal measure. An organization's measure of effectiveness can typically be tied to a profit/loss statement. Differing departments with differing missions in some way contribute to the organization's bottom line of profit or loss. Measuring an organization's performance aboard a Navy ship is not as straight forward. Admiral Mullen equates organizational effectiveness as combat capability. Each ship in the Navy is designed to contribute in some specified manner to an overall military campaign. How well a ship is able to carry out its designed mission is a measure of its combat capability. The CNO's objective for the Navy was to develop its leaders in a manner that enables individuals to improve the combat capability of their organizations. The Navy has developed specific and measurable metrics that assess an organization's capability to conduct its combat related missions. The hypotheses in this study were designed to assess this combat capability, this organizational effectiveness from the perspective of other sailors within that framework.

Eight hypotheses were tested to address the questions of the impact of leadership development programs on an organization's effectiveness. The hypotheses along with accept or reject criteria based on over one hundred surveys are listed below.

1. H_1 In the view of subordinates, leadership development in Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship. Do not accept.
2. H_2 In the view of subordinates, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

3. H_3 In the view of peers, leadership development at Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

4. H_4 In the view of peers, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

5. H_5 In the view of supervisors, leadership development at Navy school houses for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

6. H_6 In the view of supervisors, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship. Accept.

7. H_7 In the view of peers, the ship's attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship better than the Navy school house leadership development programs. Accept, though with less certainty (binomial test concludes no difference).

8. H_8 In the view of supervisors, attribute based leadership development for First Class Petty Officers improves organizational performance aboard a Navy ship better than the Navy school house leadership development programs. Do not accept at 95% confidence though the hypothesis can be accepted at 80% confidence.

Based on over one hundred surveys from supervisors, peers, and subordinates, both the Navy's formal leadership development program and the tailored shipboard leadership development program provided the ship's First Class Petty Officers skills that improved their organization's performance from the perspective of the survey respondents. The analysis determining if one program was better than the other, was less conclusive. In two of the three statistical tests, the ship's attribute based leadership development program improved the organization's performance more than the Navy's formal leadership development program. In one of the tests, the hypothesis could only be accepted at 80% confidence rather than the more traditional 95% confidence. Overall, the analysis shows that leadership development invested in First Class Petty Officers can

improve the organization's bottom line. The Navy has instituted leadership development programs (at least for First Class Petty Officers) that meet the CNO's challenge in improving leaders in the Navy with the goal of more combat effective and ready crews. This study also showed there is still room for improvement.

Discussion of Results

Discussion of the study results is divided into three parts. The first part focuses on the perspective of the cohort group that was senior to the First Class Petty Officers. The second part of this section discusses the results from the perspective of the First Class Petty Officer cohort group. The perspective of the junior sailors is presented following the discussion on the previous two groups.

Supervisors to the First Class Petty Officers consisted of Chief Petty Officers (paygrade E7 to E9), Warrant Officers (paygrade W2 to W4), and Officers (Paygrade O1 to O6). Survey results consisted of representatives of all of these groups. This group of leaders aboard a ship is in the best position to access the ship's overall combat ability. By nature of their position, this group works across departmental and divisional boundaries and is best qualified to understand the collective performance of their ship. The organization's performance from the perspective of this group best reflects a perspective of the ship to conduct its mission.

Based on the view of 26 respondents in this group, as a result of E-6s taking the Navy's formalized leadership development program, their organization's performance improved. This was also true of E6s participating in the ship's LPO Academy. According to the survey determining if the ship's LPO academy did a better job than the Navy's formalized leadership development program at empowering E6 Petty Officers at

improving their organization's performance, the results were less conclusive. Using an independent t-test, determining if the ship's LPO Academy contributed to improving organizational performance more than the Navy's formalized program could only be accepted at a confidence level of 80%. The typical threshold in tests of this nature is 95%. Also, a binomial test determining if the LPO Academy did better than the Navy's formalized program was rejected for this cohort group.

The survey for the Khaki respondents (supervisors to the First Class Petty Officers) allowed the option of providing comments. Many of these comments provided insight. For example, some believed that their E-6 Petty Officers were already performing at the maximum capability they would expect and that the organization's performance could not be further improved based on the E-6s abilities. Others thought that their E-6 was nearing the end of his or her career, were unmotivated or just not capable of improving despite the amount of leadership development provided. While the number of these respondents was not large, 3 out of 26, it could have been enough to lower the confidence level from 95% to 80%.

The second cohort group that responded to the survey were the E-6s themselves. This group was in the best position to evaluate their view on how both the Navy's formalized program and the ship's LPO academy had an impact on their skills and abilities. This group was in the best position to provide relational data between the two programs since they were the most familiar with the impact these programs had on their ability to improve the organization's performance. Since the Navy's formalized program was conducted off ship, they were in the best position to comment on that program's

value. This peer group believed both programs improved their ability to improve their organization's performance.

Using an independent t-test, this group also concluded the ship's LPO academy helped them improve their organization's performance more than the Navy's formalized program at 95% confidence. However, the binomial test rejected this premise. Due to the way the data was coded for the binomial test, the scale, or strength of belief of the respondents was lost. This test coded the respondent's answers into a yes or no. The respondents fell into two groups, 11 coded with a yes and 15 coded with a no. Based on a binomial distribution, this variance falls within normal parameters found in a 50/50 population distribution. The t-test was able to capture the scale or strength of belief that one program did better at preparing them to improve their organization's performance better than the other. Though the sample was split roughly 50/50 in this opinion, those that believed there was improvement, believed so stronger than those that did not believe there was improvement.

The last cohort group was comprised of subordinates to the E6 Petty Officers. This group is the most numerous aboard the ship and within the Navy. This group is responsible for most of the watch standing aboard ship as well as conducting the actual maintenance aboard ship. Though this group may be less in tune, based on their own observations, of the ship's ability to conduct its mission, they are very much in tune with how their Work Center or Division is performing. Their direct supervisor is the E6 Petty Officer. They offer a unique perspective on how their organization is performing based on the actions, planning and guidance their E-6 Petty Officer is providing. Often times

they are aware of the material condition of equipment and the performance of their Work Center or Division that the more senior Khaki leaders may miss.

According to the subordinate cohort group, both the Navy's formal leadership development program and the ship's LPO Academy assist their supervising E6 in improving their organization's performance. Although the Navy's formal leadership development program occurs off ship, and junior sailors may not be completely aware of all of the courses provided, many have attended one or two of the formalized courses themselves. Questions relating these two independent leadership development programs were not provided in this cohort group's survey due to their limited ability to compare their supervisors' actions based on these two programs.

Triangulation of the data between the three different cohort groups provided some consistent themes. All of the groups found both programs to be effective at equipping the First Class Petty Officers with skills and abilities that improved the organization's performance. Comments provided in all three groups focused on many of the same topics, organization skills, counseling and communication, and the importance of training. Additionally, these comments were supported by the literature review based on prior research for different types of organizations at different levels of seniority within that organization.

Conclusions

There are three fundamental conclusions to this study based on literary research, data, and data analysis. They are:

1. Leadership development programs for E6 Petty Officers can improve their organization's performance aboard a Navy ship.

2. Two independent leadership development programs improve the E6 Petty Officer's ability to improve their organization's performance better than just the one mandatory program.

3. Based on the literature, the emphasis on leadership development has been primarily on senior leaders in an organization. Not enough research or leadership development programs have been conducted on first line leaders.

Leadership development occurs in a variety of formats from personal trial and error, individual observation of others, informal training, to focused programs. The U.S. Navy uses all of those formats in developing its leaders. The Chief of Naval Operations, Admiral Mike Mullen, made developing 21st century leaders one of his top three priorities for 2006 and 2007. Based on the review of Navy leadership development programs, the Navy has answered this calling. The data shows that more can be done in developing the Navy's first line leaders, those leaders that work closest with the deckplate sailors. Sustaining combat readiness also ranks within the top three of Admiral Mullen's guidance to the Navy. Organizational performance is one element of sustaining combat readiness, and both the literature and analysis show that leadership development programs can contribute to an organization's performance.

Organizational performance improved due to the leadership development programs applied to the First Class Petty Officers in three ways. First, these front line supervisors were more effective in their role as a supervisor. They were able to implement better organizational skills and they were more knowledgeable in management programs aboard their ship. Work aboard ship improved in quality and efficiency. Second, these front line supervisors dedicated more time in developing their subordinates. More time was spent conducting training relevant to the subordinate's ability to perform their jobs. As a result, the subordinates were more capable of conducting maintenance and operations aboard the ship. Third, the ship's officers and

chief petty officers were more confident in their first class petty officers allowing for wider latitudes of delegation and responsibility. In addition to improving morale, this also allowed senior leadership to focus on other tasks.

The data analysis also indicated that more can be done for developing the Navy's first line leaders. While three formal leadership development programs is a good starting point, improved organizational performance was observed by three cohort groups on the added benefit of a specially tailored leadership development program geared to meeting the needs aboard a U.S. Navy warship. A leadership development program focusing on specific skills and attributes necessary to be more effective aboard a 21st century warship proved this additional program can improve organizational performance on top of the Navy's existing programs.

Leadership development programs have been well documented as well as their impact on an organization's bottom line. Many organizations contain multiple tiers between entry level employees and senior leaders. The first line leaders, those that oversee the production of most of the employees, have not traditionally seen the same level of research interest as senior management. Most of the research has been focused on senior levels within an organization, not the first line leader. Findings of this study support the view that additional research on first line leadership development can be fruitful.

Study Limitations

Several limitations were noted during the course of this study. Some of them were not discovered until the data analysis revealed some inconsistencies in the underlying

data. Limitations fall within two categories, limitations in the study instrumentation and limitations in the sample population.

Limitations in the study instrumentation are due to the use of a survey to capture the views of the respondents from an empirical perspective. The surveys solicit an opinion from the respondent on the level or organizational improvement that occurs as a result of one of two leadership development programs. While it was assumed these views would represent actual performance metrics, it is still a limitation of this study. This methodology was necessary due to the significant diversification of functions of over 50 different work centers and divisions. Developing performance metrics for such a diverse set of work centers from aircraft operations, boat operations, engineering and propulsion, to command and control was impractical.

The study instrumentation also assumed equal treatment of the two different leadership development programs. Observation of E6 performance before and after participation in the ship's LPO academy was straight forward. Observation of E6 performance before and after participation in the Navy's leadership development program was not as obvious. First Class Petty Officers participated in the Navy's formal program at different times and off the ship. It was not as obvious to other sailors when this occurred. Participation in the ship's LPO Academy occurred at the same time aboard ship and was clearly visible to most of the ship's crew.

The second set of limitations was due to the sample population. In typical statistical analysis, equally weighted data is assumed to contribute identically to the analysis. In this study, each of the E6s, First Class Petty Officers, which participated on two different leadership development programs and took the surveys, was assumed to be

equal. Respondents in the other two cohort groups, supervisors and subordinates, were also treated equally. In reality that was not the case. There was no distinction in the survey between First Class Petty Officers with seven or eight years in the Navy and those with nineteen years in. There was no way to ascertain individual skill level or motivation. It became clear in the comments section of the survey that not all of the First Class Petty Officers had the same abilities or motivation independent of the same exposure they had to a leadership development program. Consequently, those programs had differing levels of impact on different First Class Petty Officers. Likewise, not all of the respondents in a cohort group were equal. Not all of them were equally familiar with the First Class Petty Officers they evaluated.

Despite these limitations, the findings and conclusions are still viewed to be accurate due to the use of triangulation of the data. The use of a large number of surveys could average out many individual perspectives. Implementation of 360 degree surveys captured viewpoints from superiors, peers and subordinates and was another way to correlate the results along with the comments section of the survey that reinforced the numerical values presented.

Recommendations

There are two types of recommendations from this study. First are recommendations for the U.S. Navy. Second are recommendations for further study. Based on the findings and conclusions of this study, additional leadership development for First Class Petty Officers proved to improve the organization's performance. This leadership development program was tailored to a combat ship. The specific development program presented in this research may not be relevant to other types of Navy activities

such as aircraft squadrons, staffs, or hospitals. However, specific attribute based training developed in the context of the organization's mission may be relevant. The U.S. Navy should consider further research to determine how to implement tailored leadership development at the unit level geared toward first line leaders. This leadership development program should focus on the skills E6 Petty Officers need in the performance of their roles as first line leaders. This program should be implemented at the unit and be part of the continuous training and development that takes place in all Navy commands.

Areas for further study include a continuation of the research conducted in this study but more specifically focused on metrics. While the scope of the study may have to be narrowed to just one type of work center or division, the sample population could contain more than one ship to broaden the applicability across ships as well as ensure a large enough sample size. Rather than rely on surveys, another approach may include actual performance measurements on specific metrics that relate to the combat readiness of the organization. Another area for further study includes conducting this type of study across different types of Navy organizations.

Lastly, another area of study that has not been explored either in this study or found in the literature review relates to a cost benefit analysis of conducting leadership development. Given large for profit organizations are always aware of the bottom line in profit or loss, any consideration to support leadership development in an organization brings a definite cost. Understanding this cost and the expected improvement in the organization's performance undoubtedly was considered in the calculus by the organization to venture down this path. However, the programs reviewed in the literature

were specifically geared to a small population of senior leaders whose sphere of influence in an organization was much larger than a first line leader. A cost benefit analysis on the value of implementing a leadership development program for first line leaders would be covering new territory.

Closing Comments

Understanding the relationship between leadership development and organizational performance is a complex topic. By no means has the research in this field been exhausted. As organizations continue into the 21st century competing to be better than the competition, exploring all venues into improving organizational performance will become more important. Leadership development programs, particularly those that focus on more junior personnel, may provide the competitive advantage many organizations seek.

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APPENDIX A
Focus Group Handout

EXHIBIT 1

The Competency, Titles of the Superior Chief Petty Officer

The Management Group

Concern for Standards

- Concern for Efficiency
- Plans and Organizes
- Manages for Effective Performance
- Monitors

The Leadership Group

- Commitment to the Command's Mission
- Self-image as a Leader
- Communication
- Influencing
- Developing Others
- Genuine Concern for Subordinates

The Personal Characteristics Group

- Concern for Achievement
- Analytical Problem Solving
- Interpersonal Awareness
- Takes Initiative
- Persistence
- Assertiveness

EXHIBIT 5

Summary of the Competency Model
of the Superior Chief Petty Officer

The Management Group

Concern for Standards

Outstanding Navy Chiefs emphasize the importance of doing the job right and they enforce high standards.

- Ensures that tasks are done safely and according to regulations
- Sees that required documentation is updated
- Reacts strongly to poor performance

Concern for Efficiency

Outstanding Navy Chiefs define and organize tasks to best utilize time and resources.

- Identifies inefficiencies
- Improves efficiency of existing systems
- Delegates tasks to increase efficiency
  Encourages superiors to use efficient ways to accomplish tasks
- Builds preparation for inspections into day-to-day routine

Plans and Organizes

Through careful and systematic preparation, outstanding Navy Chiefs develop thorough and specific plans and schedules.

- Sets priorities, goals, or deadlines
- Develops detailed, step-by-step plans
- Develops schedules that optimize allocation of manpower
- Coordinates schedules with others
- Anticipates obstacles, and plans accordingly

Manages for Effective Performance

Outstanding Navy Chiefs obtain optimal results from their subordinates by coordinating their actions. They challenge standards and demand high levels of performance.

- Sets and clearly communicates expectations for level of work-center performance
- States consequences of violations and/or nonperformance up-front

  Holds subordinates accountable for poor performance
- Matches people and jobs to get the best performance
- Promotes cooperation and teamwork for effective performance

Monitors

Outstanding Navy Chiefs routinely gather information and keep track of the work process.

- Observes procedures and processes
- Monitors records, equipment, and resources
- Asks questions to assess subordinates' readiness

The Leadership Group

Commitment to the Command's Mission

Outstanding Navy Chiefs act from a strong dedication to the Navy, the command, and the work unit.

- Acts with the best interests of the command in mind
- Puts the Navy and the unit's needs above concern for any one individual

Self-image as a Leader

Outstanding Navy Chiefs identify themselves as leaders and key factors in the unit's successful performance.

- Clearly defines role and responsibilities of the CPO
- Sees self as manager or leader
- Sets the example for subordinates
- Sees self as someone who makes things happen

Communication

Outstanding Navy Chiefs provide and receive information throughout the chain of command to facilitate the understanding of task-related issues.

- Keeps others informed
- Gives clear directions and assigns specific responsibilities when delegating
- Listens to suggestions from subordinates

Makes self available for questions

Influences

Outstanding Navy Chiefs successfully use a variety of strategies to influence others toward task accomplishment.

Uses threats or authority to influence others

- Persuades by presenting logical reasons or information
- Uses setting and timing for optimal impact
- Acts to motivate subordinates
- Gives reasons for decisions

Develops Others

Outstanding Navy Chiefs provide training and work experiences designed to improve subordinates' performance.

- Makes training opportunities, different jobs, and expert help available

Provides constructive feedback

- Delegates to develop others
- Identifies training opportunities in routine tasks

Genuine Concern for Subordinates

Outstanding Navy Chiefs actively support subordinates in overcoming problems and recognize their achievements and ability to do better.

- Expresses positive expectations for subordinates
- Acts to get rewards, recognition, or liberty for subordinates
- Helps subordinates resolve personal problems

The Personal Characteristics Group Concern for Achievement

Outstanding Navy Chiefs seek new challenges and work hard to reach higher levels of accomplishment.

- Takes on challenges with enthusiasm
- Tries to get own unit to outperform others or the norm
- Assesses a work center's level of performance using comparative measures
- Feels frustrated when situations or others prevent the completion of a task in a timely and effective manner

Analytical Problem Solving

. Outstanding Navy Chiefs analyze complex situations and evaluate information in order to solve problems.

- Identifies the causes or central issues in a problem
- Weighs pros and cons of alternatives
- Draws inferences or sees implications
- Relates present situation to other similar situations (and different ones)

Interpersonal Awareness

In order to decide on a course of action, outstanding Navy Chiefs try to understand what drives others' behavior or to anticipate their reactions.

- Thinks about impact of own or others' actions
- Assesses the motives or perspectives of others

Takes Initiative

Outstanding Navy Chiefs originate changes in work-center operations and do not hesitate to investigate and tackle difficult situations.

- Searches out information to accomplish tasks or make decisions
- Develops new plans, procedures, or systems
- Takes calculated risks
- Takes an active role in critical situations; hands-on when required

Persistence

Outstanding Navy Chiefs expend extraordinary effort to complete a task or overcome an obstacle.

- Does whatever is ethically necessary to complete job
- Takes repeated action to overcome obstacles to ensure that goals are accomplished
- Makes self and subordinates available to work whatever hours are needed

Assertiveness

Outstanding Navy Chiefs confront issues directly, insist on their legitimate position in the chain of command, yet show restraint under stress.

- Addresses key issues and conflicts with others
- Acts forcefully and with confidence when dealing with seniors and peers

Insists on being given full job responsibility

- Demonstrates self-control in a conflict situation or when provoked

PRIMARY LEADERSHIP DEVELOPMENT PROGRAM

Course Outline

COURSE INTRODUCTION

UNIT 1 - ACCOMPLISHING THE MISSION

1-1 Combat and Crisis Leadership

1-2 Leadership in the Military Environment

UNIT 2 - LEADING PEOPLE

2-1 Situational Leadership

2-2 Responsibility, Authority, and Accountability

UNIT 3 - WORKING WITH PEOPLE

3-1 Conflict Management

3-2 Team Management

3-3 Decision-Making

UNIT 4 - RESOURCE STEWARDSHIP

4-1 Subordinate Development

4-2 Counseling

4-3 Performance Evaluation

UNIT 5 - LEADING CHANGE

5-1 Change Management

5-2 Planning

5-3 Quality of Life and Work Center Climate

ADVANCED LEADERSHIP DEVELOPMENT PROGRAM

Course Outline

COURSE INTRODUCTION

UNIT 1 Effective Communications

UNIT 2 Systems

UNIT 3 Planning and Resource Stewardship

UNIT 4 Subordinate Development

UNIT 5 Counseling

UNIT 6 Team Development

UNIT 7 Decision-Making and Risk Management

UNIT 8 Command Unity

UNIT 9 Combat and Crisis Leadership

APPENDIX B

Survey for Sailors E-1 to E-5

Survey for assessment of the Navy's Schoolhouse Leadership Development Program.

The purpose of this survey is to provide data for research on the effectiveness of leadership development programs within the Navy. Participation in the following survey is voluntary. Participation in this survey means you consent to taking the survey. Do not put your name on the survey as results are anonymous. There is no risk to you taking the survey. While there is no personal reward for taking the survey, the data collected here can be used to improve leadership development within the Navy.

Background. As part of the Navy's leadership development First Class Petty Officers are required to take three courses in leadership before being eligible to become a Chief Petty Officer. The first is called the First Line Leadership Development Program (FLDP) and is given when they were E-4s. The second course is called the Primary Leadership Development Program (PLDP) and is given when they are E-5s. The last course is the Advanced Leadership Development Program (ALDP) and is taken when they are an E-6. Answer the survey below from a perspective of how effective you think these programs have been influencing the First Class Petty Officer you work for.

On a scale from 1 to 10 please answer the following. A score of 1 implies in your opinion, there has been no impact of the Navy's Leadership Development Program. A score of 10 implies there has been a significant impact to the First Class Petty Officer that took the Navy's Leadership Development Program and there have been observable differences in that person's ability to lead their organization in improving their work center's performance. A score from 2-9 is your subjective opinion of effectiveness in between 1 and 10.

1. On a scale of 1 to 10 (1 is none, 2 is low, 10 is significant), how well has your supervisor improved your division or work center's performance? State n.a. if you don't know.
2. Provide examples of how your supervisor has improved your division or work center's performance.

Survey for Sailors E-1 to E-5

Survey for assessment of the ship's Leadership Development Program.

The purpose of this survey is to provide data for research on the effectiveness of leadership development programs within the Navy. Participation in the following survey is voluntary. Participation in this survey means you consent to taking the survey. Do not put your name on the survey as results are anonymous. There is no risk to you taking the survey. While there is no personal reward for taking the survey, the data collected here can be used to improve leadership development within the Navy.

Background. USS SAIPAN has provided a leadership development program to the First Class Petty Officer aboard this ship. Answer the survey below from a perspective of how effective you think this program has been influencing the First Class Petty Officer you work for.

On a scale from 1 to 10 please answer the following. A score of 1 implies in your opinion, there has been no impact of the ship's Leadership Development Program. A score of 10 implies there has been a significant impact to the First Class Petty Officer that took the ship's Leadership Development Program and there have been observable differences in that person's ability to lead their organization in improving their work center's performance. A score from 2-9 is your subjective opinion of effectiveness in between 1 and 10.

1. On a scale of 1 to 10 (1 is none, 2 is low, 10 is significant), how well has your supervisor improved your division or work center's performance? State n.a. if you don't know.
2. Provide examples of how your supervisor has improved your division or work center's performance.

Survey for First Class Petty Officers

Survey for assessment of the Navy's Schoolhouse Leadership Development Program.

The purpose of this survey is to provide data for research on the effectiveness of leadership development programs within the Navy. Participation in the following survey is voluntary. Participation in this survey means you consent to taking the survey. Do not put your name on the survey as results are anonymous. There is no risk to you taking the survey. While there is no personal reward for taking the survey, the data collected here can be used to improve leadership development within the Navy.

On a scale from 1 to 10 please answer the following. A score of 1 implies in your opinion, there has been no impact of the Navy's Leadership Development Program. A score of 10 implies there has been a significant impact to the First Class Petty Officer that took the Navy's Leadership Development Program and there have been observable differences in that person's ability to lead their organization and improve work center performance. A score from 2-9 is your subjective opinion of effectiveness in between 1 and 10.

1. Are you currently in a supervisory position?
2. How many people work for you?
3. How long ago did you take your last formal Navy leadership course (Primary Leadership Development Program (PLDP) or Advanced Leadership Development Program (ALDP))?
4. As a result of the formal Navy leadership course (PLDP, ALDP) you received, on a scale of 1 to 10, how much have **you** been able to improve the performance of your division or work center (1 is none, 2 is little, 10 is significant).
5. Provide examples of how you have improved your division or work center's performance based on this leadership development program.
6. As a result of the formal Navy leadership course (PLDP, ALDP) your peers received, on a scale of 1 to 10, how much have **they** been able to improve the performance of your division or work center (1 is none, 2 is little, 10 is significant).

Survey for First Class Petty Officers

Survey for assessment of the ship's Leadership Development Program.

The purpose of this survey is to provide data for research on the effectiveness of leadership development programs within the Navy. Participation in the following survey is voluntary. Participation in this survey means you consent to taking the survey. Do not put your name on the survey as results are anonymous. There is no risk to you taking the survey. While there is no personal reward for taking the survey, the data collected here can be used to improve leadership development within the Navy.

On a scale from 1 to 10 please answer the following. A score of 1 implies in your opinion, there has been no impact of the Leadership Development Program. A score of 10 implies there has been a significant impact to the First Class Petty Officer that took the ship's Leadership Development Program and there have been observable differences in that person's ability to lead their organization. A score from 2-9 is your subjective opinion of effectiveness in between 1 and 10.

1. Are you currently in a supervisory position?
2. How many people work for you?
3. How long ago did you take the ship's leadership development program (if never, state n/a)?
4. As a result of the ship's leadership based course you received, on a scale of 1 to 10, how much have you been able to improve the performance of your division or work center (1 is none, 2 is low, 10 is significant).
5. Provide examples of how you have improved your division or work center's performance based on this leadership development program.
6. As a result of the ship's leadership development program your peers received, on a scale of 1 to 10, how much have **they** been able to improve the performance of their division or work center (1 is none, 2 is little, 10 is significant).

Survey for Officers and Chief Petty Officers

Survey for assessment of the Navy's Schoolhouse Leadership Development Program.

The purpose of this survey is to provide data for research on the effectiveness of leadership development programs within the Navy. Participation in the following survey is voluntary. Participation in this survey means you consent to taking the survey. Do not put your name on the survey as results are anonymous. There is no risk to you taking the survey. While there is no personal reward for taking the survey, the data collected here can be used to improve leadership development within the Navy.

Background. As part of the Navy's leadership development First Class Petty Officers are required to take three courses in leadership before being eligible to become a Chief Petty Officer. The first is called the First Line Leadership Development Program (FLDP) and is given when they were E-4s. The second course is called the Primary Leadership Development Program (PLDP) and is given when they are E-5s. The last course is the Advanced Leadership Development Program (ALDP) and is taken when they are an E-6. Answer the survey below from a perspective of how effective you think these programs have been influencing the First Class Petty Officers.

On a scale from 1 to 10 please answer the following. A score of 1 implies in your opinion, there has been no impact of the Navy's Leadership Development Program. A score of 10 implies there has been a significant impact to the First Class Petty Officer that took the Navy's Leadership Development Program and there have been observable differences in that person's ability to lead their organization in improving their work center's performance.

1. On a scale of 1 to 10 (1 is none, 2 is low, 10 is significant), how well have the First Class Petty Officers that work for you improved their division or work center's performance? State n.a. if you don't know.
2. Provide examples of how the First Class Petty Officers have improved their division or work center's performance.
3. How long ago did they receive the formal Navy leadership training (PLDP, ALDP)?

Survey for Officers and Chief Petty Officers

Survey for assessment of the ship's Leadership Development Program.

The purpose of this survey is to provide data for research on the effectiveness of leadership development programs within the Navy. Participation in the following survey is voluntary. Participation in this survey means you consent to taking the survey. Do not put your name on the survey as results are anonymous. There is no risk to you taking the survey. While there is no personal reward for taking the survey, the data collected here can be used to improve leadership development within the Navy.

Background. USS SAIPAN has provided a leadership development program to the First Class Petty Officer aboard. Answer the survey below from a perspective of how effective you think this program has been influencing the First Class Petty Officers who have taken this course.

On a scale from 1 to 10 please answer the following. A score of 1 implies in your opinion, there has been no impact of the ship's Leadership Development Program. A score of 10 implies there has been a significant impact to the First Class Petty Officer that took the ship's Leadership Development Program and there have been observable differences in that person's ability to lead their organization in improving their work center's performance.

1. On a scale of 1 to 10 (1 is none, 2 is low, 10 is significant), how well have the First Class Petty Officers that work for you improved their division or work center's performance? State n.a. if you don't know.
2. Provide examples of how your supervisor has improved their division or work center's performance.

APPENDIX C

Survey for LPO Academy

Focus Group Survey Summary

	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6
Question	List management related skills you expect out of a Leading Petty Officer (LPO).	Which of these skills would you like to see be taught aboard USS SAIPAN.	List any leadership related skills not already taught at the Navy courses you expect of an LPO.	Which of these skills would you like to see be taught aboard USS SAIPAN.	List personal characteristics you expect of an LPO.	Which of these skills would you like to see be taught aboard USS SAIPAN.
Respondent 1	1 Flexibility to handle dynamic environments 2 Know how to give orders 3 Attention to the small stuff 4 Grammar 5 Knowledge of instructions	3 and 5: What small stuff to look out for and what instructions to be familiar with. CPOs spend most tome on research that should already be done.	Attention to the small stuff and how that makes a good mid-grade leader. The willingness to work hard to achieve the mission.	Can you teach how to really care? Can you teach how to give an order?	1 Aware of people, the plan, and assets. 2 English as a 1st language & grammar. 3 Mission focus and how they contribute.	1 & 3: What actual role is the mid-grade PO's.
Respondent 2	1 Writing (Awards) 2 Financial understanding 3 Evaluation writing 4 Counseling procedures	All	Understanding your personnel	All	1 Good listener 2 Advisor 3 Positive attitude 4 Motivator 6 Leader	All
Respondent 3	1 Personnel 2 Time	Hands-on "How to training in:	Effective writing	Effective writing	Confidence, organized, good	Speaking skills

	3 Workload 4 Routine programs (3M, Supply, DCPO)	Rsupply, Radm, DC/3M, Spot Checks, Skeduling			listener, effective counselor, effective speaker, enthusiastic, competitive, physically fit	
Respondent 4	1 Be able to multi-task 2 Be able to delegate 3 Be able to motivate sailors to accomplish a common goal 4 Be able to match the right person with the right job 5 Effectively manage time.	As many as possible	1 Be a forward thinker. Think past the issue at hand. 2 Be an efficient communicator. 3 Be an effective listener. 4 Be an effective planner. 5 Lead by example. 6 Be an effective counselor. 7 Be an effective teacher.	As many as possible	1 Be able to deal wit different personalities within the Division. 2 Have integrity 3 Be personable & approachable 4 Have humility 5 Be accountable	As many as possible
Respondent 5	1 Use CSMP & PMS as a working tool 2 Develop POA&M to forecast future work. 3 Manage the work day around ship's weekly & daily schedule to maximize "time" for production & training.	All	1 Discipline & Military bearing 2 Support commands policies 3 To be the LPO of a division does not always mean you are the senior man in the division	All	I want an LPO that is hungry to lead; that takes care of his personnel but is not going to familiarize himself/herself with the troops; that will follow up on jobs to ensure they are done correctly; that will train	All

					their personnel so as to eliminate "single point falure" because only one person has the knowledge/quals.	
Respondent 6	1 Ability to train subordinates (preparation through execution plus delivery techniques e.g. lecturing). 2 Delegation and follow-up. 3 Time management skills. 4 Able to determine standards and enforce them.	All	1 Mentoring skills / counseling skills with the ability to determine trouble signal .indicators. 2 Communication skills (multipath) 3 Team building techniques.	All	1 Strong ethics and morals. 2 Respectfully to superiors and subordinates. 3 Familiarity with current management tools.	1 Ethics and morals 2 Refresher course with management tools: Radmin, Rsupply, PMS standards, NAVFIT 98, myppay, NKO.
Respondent 7	1 Writing skills 2 Process management 3 Time management 4 Coordination / Planning skills 5 Counseling skills 6 Communication skills 7 Computer	All	Some of the leadership courses that are taught…should be reinforced, because the Navy decided to move some leadership topics to CD-ROM, self-taught method, and that's the WRONG approach.	Again, the Management, Leadership, Personal Characteristics Group topics should be taught in SAIPAN	1 Initiative 2 Assertiveness 3 Problem solving 4 Power of Influence 5 Motivation	All, this will develop a 360 LPO

	related skills (power point, excel, word) 8 Delegation 9 Motivation 10 Military protocol fundamentals					
Respondent 8	1 Project management, time management, mentoring skills 2 Academic skills, grammar, admin skills, eval writing. 3 3M system, Rsupply, Radmin	1 3M 2 Rsupply 3 Radmin 4 Project management	Clear understanding of Navy/Saipan mission	Provide training on mission & how Saipan fits into overall Navy/DoD picture	Honor, courage, commitment do a good job of covering the core values from which follow one's traits at characteristics.	Can't just "teach" characteristics, they are instilled over time of involve changes in a persons "heart" not just being educated about them.
Respondent 9	Flexibility, mission oriented, able to perform under pressure, motivator, coordinate collective efforts to achieve the mission or goal, structure	All	Character, self discipline, fidelity, faithful, consistency, initiative, honesty, energetic, unity, dependency	All	Morals, values, dedication, courageous, spirit de corps	All. In my opinion this is an ongoing process that should occur at all levels. It is especially imperative at the LPO level because there are expectations up and down the chain of command once you are the Chief.

APPENDIX D

LPO Academy Outline

Introduction

- Navy Mission – Seapower 21
- USS SAIPAN Mission
- Expectations of LCPO's & Department Heads on top performing First Class Petty Officers
- Recap of Leadership as taught in the schoolhouses
- Management skill sets

People Skills

- Discussion on Ethics, Honor Courage Commitment
- Counseling, Mentoring, and Coaching – How to do it
- Team Building
- How to motivate sailors today, what do junior sailors want today
- The UCMJ and the E-6's role – How to give orders that are followed

First Class Petty Officer's – the person

- Life as a 30 something
- Health issues
- Healthy eating
- Dealing with stress
- Fitness – How this ties in as a leader with stamina, endurance and patience

Military Writing

- Writing evaluations, awards, nominations and , LDO & CPO packages

Taking Care of the Small Stuff

Standards and how to enforce them

Understanding processes & systems

Shipboard maintenance as a system, 3M, the CSMP & 2Kilos

Supply as a system and Rsupply

The sailor as a system, Radmin, NKO, MyPay, Service records

Training as a system – training records and training plans – how to train

How to do space inspections

How to do PMS spot checks

How to shot check tag outs, and Hazmat program

Time Management and Problem Solving

Identifying the Problem (what needs to be done)

Resources – manpower, equipment, money, time

Timetables and deadlines, How to build a POA&M

Prioritization – how to multitask, delegation

Monitoring work progression & follow-up

Closing

How to do a 360 degree assessment on yourself

Suggestions for leadership development improvement

APPENDIX E
Survey Summaries
E1 to E5 Survey Summary

	Schoolhouse Development Program		Ship's Development Program	
Code	Q1	Q2	Q1	Q2
1	5		6	Improving morale
2	1	N/A	4	Delegation
3	1	N/A	6	A better leader
4	6	Better leader	6	Delegation
5	1	N/A	3	Patience & Listening
6	7	teamwork	8	Creativity
7	1	N/A	7	Training programs
8	8	Productivity & Morale	7	More 1 on 1, listening
9	1	N/A	9	Listening, motivating
10	1	N/A	10	Involved in everything
11	1	N/A	7	Productive work
12	1	N/A	6	
13	1	N/A	8	Multitasking
14	2		2	No improvement
15	2		2	No improvement
16	2		2	No change
17	6		9	Improved paperwork & trng
18	2		2	
19	4		4	
20	5		7	
21	8		8	
22	5		5	Setting high standards
23	6	Ensuring good OJT	6	Timely work
24	7		7	Keeps spaces up
25	10	Improved morale	10	Training and Communication
26	1	N/A	8	Fairness, listening, accountability
27	1	N/A	8	Creativity
28	3		3	No improvement
29	5	Memory problems	3	He doesn't do much
30	6		9	Quality work
31	5	Works us like dogs	7	Improved standards & appreciation
32	8	Leads by example	8	Great training programs
33	10		10	
34	9	Standards	8	Great training programs
35	10	Training & OJT	9	Training & mentoring
36	9	Training	9	Training
37	9	Training	9	Mentoring
38	10	Getting the job done	10	We have come a long way
39	9	High standards	9	Motivation
40	10	Professional development	10	Communication skills
41	10	Good working environment	10	Good working environment
42	1		1	No improvement
43	1		1	The course is not the problem
44	3	Training	3	Leads by example, initiative
45	1	N/A	4	Training
46	1	N/A	4	High standards
47	1	N/A	5	Training
48	1	N/A	6	Training & deligation
49	1	N/A	8	Stands up for troops
50	1	N/A	6	Working on quals
Sum	220		319	
Average	4.4		6.38	

E-6 Survey Summary

Schoolhouse Development Program

Code	Q1	Q2	Q3	Q4	Q5	Q6
1	Y	31	6 mos	5	Advancement	5
2	Y	5	36 mos	7	Military Bearing	7
3	Y	60	7 mos	8	Commitment	3
4	Y	75	60 mos	6		6
5	Y	12	12 mos	6	Situational awareness	5
6	Y	30	36 mos	6	Diversity	7
7	Y	28	36 mos	4	Navy Knowledge Online	5
8	Y	33	40 mos	4		4
9	Y	16	6 mos	8		8
10	Y	24	12 mos	5	Motivation skills	5
11	Y	42	48 mos	10	Networking	10
12	Y	16	48 mos	7	Helped me to be better	6
13	Y	9	36 mos	8	Counseling skills	8
14	Y	5	4 mos	3	Delegation	1
15	Y	5	36 mos	8		1
16	Y	7	24 mos	9		9
17	N	4	8 mos	1	N/A	1
18	Y	7	7 mos	1	N/A	1
19	N	0	42 mos	1	N/A	1
20	N	0	60 mos	8		8
21	Y	37	12 mos	5		8
22	Y	11	4 mos	4	Getting job done right	8
23	Y	8	6 mos	5	Better situation awareness	7
24	Y	16	10 mos	4		7
25	Y	12	13 mos	6		10
26	Y	6	6 mos	4	Listening to troops	7
27	Y	11	24 mos	5	Commitment	8
28	Y	23	17 mos	5		8
29	Y	7	30 mos	4	Use of NKO	8
30	N	0	8 mos	1	N/A	1
31	Y	19	6 mos	6		9
32	Y	27	12 mos	5	Motivation skills	8
Sum				169		190
Average				5.28		9.05

Ship's Development Program

Q1	Q2	Q3	Q4	Q5	Q6	Ship>Navy
Y	31	3	7	Standards	7	Yes
Y	5	3	7	Accountability	6	No
Y	60	3	5	Zone Inspect	2	No
Y	75	3	8		8	Yes
Y	12	3	4		4	No
Y	30	3	7	Better tools to do job	7	Yes
Y	28	3	6	Better Leader	7	Yes
Y	28	3	6		6	Yes
Y	16	3	8	Listening	8	No
Y	24	3	5	No change in division	5	No
Y	42	3	8	3-M Program	8	No
Y	16	3	7	People skills	5	No
Y	9	3	8	Accountability	8	No
Y	5	3	5		4	Yes
Y	5	3	8		1	No
Y	7	3	9	Overall leadership	9	No
N	4	3	4		5	Yes
Y	7	3	1		1	No
N	0	3	4		2	Yes
N	0	3	8		8	No
Y	37	3	5	Better communicator	8	No
Y	11	3	8	Learning how to make a difference	8	Yes
Y	8	3	7	Listening skills	7	Yes
Y	16	3	7		6	Yes
Y	12	3	10	Holding sailors accountable	10	Yes
Y	6	3	7		7	Yes
Y	11	3	8		7	Yes
Y	23	3	8	Gave me tools to do better	6	Yes
Y	7	3	8		8	Yes
N	0	3	1		1	No
Y	19	3	9	Higher standards	9	Yes
Y	27	3	8	Training for advancement	7	Yes
Sum			211			
Average			6.59			

Khaki Survey Summary

	Schoolhouse Development Program		Ship Development Program		
Code	Q1	Q2	Q1	Q2	Ship>Navy
1	7	5 Vector Model	7	Improved Morale, reduced mishaps	No
2	10	Problem solving	2	Leadership already established	No
3	5		2		No
4	10	Professional growth	10	Better administratively & comms	No
5	2		2	No improvement to lead	No
6	1	N/A	2	No improvement	Yes
7	1	N/A	4	Little improvement	Yes
8	1	N/A	4	Learned resource management	Yes
9	1	N/A	1	No impact	No
10	2		3	Take care of people more	Yes
11	3	Took more on	3	Acts more mature	No
12	9	Increased quals & warefare designations	9	More sailor recognition	No
13	5	Improved counseling	7	Division maintained quals	Yes
14	7	Accountability	8	Delegation & mentoring	Yes
15	9	Accountability	8	Networking	No
16	6	More hands on	6	Improves sailor training	No
17	3	Leadership styles	7	Improved writing & counseling	Yes
18	1	N/A	1	No change	No
19	8	PQS Programs	8	Motivated & work quality	No
20	1	N/A	1	Cannot recall a difference	No
21	4	Always reactive	6	Thinking ahead	Yes
22	5		5		No
23	3		3	None, sailor near HYT	No
24	3	Diversity	7	Improved training program	Yes
25	2		6	Better organizational skills	Yes
26	1	N/A	6	Improved motivation of division	Yes
Sum	110		128		
Average	4.78		5.57		