ABSTRACT

A Single Case Study Exploring United States Navy Service Members' Perceptions of their Apprenticeship-Level Training

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The tragedies that befell the USS Fitzgerald and USS John S. McCain in 2017 cost 17 service members their lives. These incidents sent shock waves through the service, with several upper-echelon officers losing their positions while temporarily halting all naval operations. Investigating the collisions, The National Transportation Safety Board (NTSB) cited a lack of training as a causal factor. The NTSB illuminated a problem with apprentice-level training in the U.S. Navy by mentioning a lack of training as a causal factor. Research has also shown that service members do not prioritize their apprentice-level training. On a macro scale, America lags behind its global counterparts in implementing apprentice-level training to fill skilled worker vacancies. These incidents should serve as revelatory moments to study and fully grasp the scope of the problem.

The purpose of this single case study was to explore five active-duty service members' perceptions of their apprentice-level training through the lens of Deci and Ryan's (1985) self-determination theory. I chose the study participants via criterion-based convenience sampling. Three research questions guided the study in capturing the

participants' perceptions. The participants completed a questionnaire, individual interviews, and a focus group interview in the data collection process.

I uncovered three key findings related to this study. First, service members did not feel autonomous during their apprenticeship-level training in the U.S. Navy particularly in job choice, the pacing of learning, and assignment and location selection. Second, service members did not feel the training they received provided the requisite level of competence for their subsequent jobs. Third, the sense of community among service members is contingent upon their instructors and peers. The findings of this study have implications for new U.S. Navy accessions, U.S. Navy apprentice training instructors, and senior U.S. Navy decision-makers. Finally, I offer how to best distribute the findings from the study.

Keywords: military, apprenticeship training, andragogy, education, motivation, self-determination theory

A Single Case Study Exploring United States Navy Service Members' Perceptions of their Apprenticeship-Level Training

by

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A Dissertation

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

ATT: Apprentice Technical Training

CBT: Computer Based Training

CIWS: Close In Weapons Systems

CRM: Crew Resource Management

ET: Electronics Technician

FC: Fire Controlman

IT: Information Technology

IIT: Infantry Immersion Trainer

NMCI: Navy Marines Corps Internet

NEC: Naval Enlisted Code

NGM: Neurogastroenterology and Motility

NSIPS: Navy Standard Integrated Personnel Systems

NTSB: National Transportation Safety Board

MOS: Military Occupation Specialty

PT: Physical Training

RMC: Recruiter Management Course

SPY: Army/Navy Code for the Radar System

USMAP: United States Military Apprenticeship Program

USS: United States Ship

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DEDICATION

To David, I never met you, but I carry your spirit with me every day. I also dedicate this dissertation to the hard-working men and women of the U.S. Navy. Few understand the challenges you face daily. I hope this study imparts perspective in your careers.

CHAPTER ONE

Background and Needs Assessment

Introduction

Military training is lacking regarding disaster preparedness (National Transportation Safety Board [NTSB], 2019, 2020). As a result, there have been avoidable disasters. For example, 17 service members lost their lives in two highly publicized collisions off the coasts of Japan and Singapore in 2017. The USS Fitzgerald was 12 miles from the coast of Japan on the night of its collision with Motor Vessel ACX Crystal at approximately 1:30 AM on June 17, 2017 (Miller et al., 2019). The impact of the two ships spun the USS Fitzgerald 360 degrees over the next five minutes (Miller et al., 2019). The collision left the USS Fitzgerald without power and unable to move, and seven trapped service members were in a compartment they could not escape. Service members died from what senior leadership dubbed an "avoidable accident" (Miller et al., 2019, Epilogue section). Findings from the NTSB's (2020) investigation cited insufficient crew training as a probable cause for the incident.

Thirty-four days later, the USS John S. McCain was in a traffic separation scheme (TSS) in the Straits of Malacca between Singapore and Malaysia (NTSB, 2019). Operating in a TSS dictates proximity to other ships. While transiting the TSS to enter the port in Singapore, the USS John S. McCain crew perceived they had lost control of their steering systems (NTSB, 2019). As the crew attempted to regain steering, the USS John S. McCain turned 10 degrees off course, striking the tanker Alnic MC at 5:24 AM (NTSB, 2019). Ten trapped service members could not escape their compartment. Like

USS Fitzgerald, the NTSB investigated the USS John S. McCain collision. The NTSB (2019) cited a lack of crew training as the probable cause for the incident, highlighting the inability of the crew to operate their equipment.

To learn more about training in the U.S. Navy, I designed this single case study to explore five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory. The study findings provide information for stakeholders who make decisions about the training practices of the U.S. Navy and can inform their future decisions. Additional information benefits new U.S. Navy accessions, U.S. Navy apprentice training instructors, and senior U.S. Navy decision-makers.

Statement of the Problem

The lack of training highlighted as the probable cause of the USS Fitzgerald and USS John S. McCain incidents demonstrates the need for research about the training protocols in use by the U.S. Navy (NTSB, 2019, 2020). Foreign nations conducted case studies on the disasters to ensure their governments do not repeat the same mistakes (Moon, 2018). The Republic of Korea's findings mirrored the NTSB: Crew education was to blame for these incidents (Moon, 2018). Moon (2018) also called for Korea to enhance its educational efforts for its service members in light of the collisions of the USS Fitzgerald and USS John S McCain. These tragedies traumatized 17 families. Several upper-echelon officers lost their positions because of the incidents (Miller et al., 2019). The investigation failed to explore the root cause analysis (NTSB, 2019, 2020). Severe consequences typically accompany any incidents such as these tragedies. The second incident in a short period forced an immediate pause in operational commitments.

Their upper-echelon commanders stripped all operational tasking, or daily activities, from ships and airplanes. All tasking in the interests of American security ceased for more than a week.

Apprenticeship-level training represents only 0.3% of the workforce in the United States (Lerman, 2010). This gap illustrates America's inability to match other advanced economies (Lerman, 2010). The benefits of apprenticeships are evident in the metrics surrounding an economy's workforce: Economies with vibrant apprenticeships have lower unemployment rates than those without them (Lerman, 2010).

When many first-term service members choose to leave the service after completing their initial term, apprenticeship programs in the U.S. Navy are ineffective. (Sprang, 2020). Jewell (2012) found that Navy service members often prioritize licensing or medical care over their training and qualifications. Guiterman (2015) analyzed the construct of naval apprenticeship training, finding their current model unsustainable. In analyzing naval training requirements, Fletcher (2018) concluded that the allotment of training for service members does not currently meet the requirements of their demands. The military offers apprenticeship-level training in specific learner disciplines; examining service members' perceptions of their apprenticeship-level training can yield potential paths to improvement.

In the U.S. Navy, these disciplines begin to blend. As a direct result of the USS Fitzgerald and USS John S McCain tragedies, examining apprenticeship-level training for any possible improvements is critical for improvement to avoid any future disastrous loss of life. Engaging with service members to distill their perceptions of their apprenticeship-level training may reveal potential areas of needed improvement. As such, the purpose of

this single case study was to explore five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory.

Literature Review

The following four-part literature review argues that the military is incapable of recognizing the ineffectiveness of their training and that the ideology employed by civilians is currently superior to that of the military. First, I highlight motivation in academic settings as the theory of academic motivation is central to the research. Second, I argue that hegemony in the U.S. Navy results in a needed improvement to recognize training problems. Third, I scrutinize the training ideologies across civilian and military sectors. Finally, I share literature on andragogy and apprentice-level training.

Motivation in Academic Settings

Investigating motivation in academic settings draws upon several disciplines. Houle (1963) was the first to publish about motivation in adult learning. Houle (1963) conducted a study of 22 adult learners and identified three distinct learners: (a) goal-oriented learners, (b) activity-oriented learners, and (c) learning-oriented learners. Houle's (1963) formative work gave rise to several researchers and theories about motivating factors for students in the academic sector. McClusky (1963) addressed motivation in an equation of resources versus demand for a learner. McClusky (1970) offered that adult learners must have enough margin to learn adequately. Rueda and Moll's (1994) theory of situated motivation indicated that motivation is partly a function of the learning environment. The learning environment, among other factors such as culture and awareness, completes the motivational factors for learners. Wlodkowski

(2008) presented a motivational framework for adult motivation in learning: (a) establishing inclusion, (b) helping learners connect the instructional material to their life experience, (c) creating experiences that value the learners' perspective, and (d) building confidence in the learner's academic experience. All four aspects are essential in motivating adult learners and helping them flourish in the classroom (Wlodkowski, 2008). Kaplan et al. (2012) theorized that learners and their learning environment influence each other. Once students engage with activities or instructional materials, they immerse themselves in the learning environment.

Glynn et al. (2005) examined the constructs in general education to understand adult learners' motivation. Presenting seven implications for stoking the motivation of students, Glynn et al. (2005) did not seek to settle the debate on how to motivate these learners effectively. Instead, they sought to illuminate the existing constructs of motivation in place. This work is a crucial starting point in understanding students' motivation and the different theories surrounding this sect of academia.

Dishon-Berkovits (2014) and Sogunro (2014) conducted studies on motivation in academic settings. Dishon-Berkovits (2014) probed the correlation between goal-setting theory, achievement goal theory, and student performance. The study revealed that teachers shaped student motivation by assigning challenging educational goals (Dishon-Berkovits, 2014). As teachers push their students to higher performance levels, their incentive to meet these demands increases (Dishon-Berkovits, 2014). Sogunro (2014) conducted a study with 203 university students to determine their motivational factors in continuing their education. The students self-reported these factors using questionnaires, interviews, and focus groups (Sogunro, 2014). These eight factors include (a) quality of

instruction, (b) quality of the curriculum, (c) relevance and pragmatism, (d) interactive classrooms and effective management practices, (e) progressive assessment and timely feedback, (f) self-directedness, (g) conducive learning environment, and (h) effective academic advising practices (Sogunro, 2014). Sogunro (2014) stated that "[t]he common theme running through the eight factors is their catalytic nature in motivating students to learn" (p. 34). These factors provide a basis for future research in motivation related to academic pursuits.

Hegemony in the U.S. Navy

Hegemony in the U.S. Navy is a construct that favors White males in authoritative positions. Connell (1987) defined hegemony as "ideological warfare" (p. 187) in which groups are marginalized to minimize their power. Connell (1995) indicated that "hegemony is likely to be established if there is some correspondence between cultural ideal and institutional power" (p. 77). Hinojosa (2010) cited the hierarchical dominance instituted within the military as a purposeful caste system to subordinate those with perceived differences. A caste system dominated by toxic masculinity in which males perceive themselves to be more "morally oriented, self-disciplined, physically able, emotionally controlled, martially skilled, or intelligent" (p. 179) than their counterparts of different service branches or ranks (Hinojosa, 2010). Combining the work of Connell (1987, 1995) and Hinojosa (2010) illuminates the hegemony present in the military. Connell (1995) presents that the military profession provides resources for constructing a hegemonic identity.

Literature extensively documents the prevalence of toxic leadership within the armed services. Gale (2020) showcased the adverse effects that toxic leadership can

perpetuate in a unit. In a profession where cohesion is critical to success, toxic leadership cannot thrive. Gale's (2020) participants ultimately decided to leave service due to the toxic leadership they endured. Mamaril (2023) exposed the experiences of five junior officers in the U.S. Navy who labored through toxic leadership. The themes surrounding these toxic leaders profiled were "debilitating, negative, and relentless" (Mamaril, 2023, pp. 268, 271, 281). The study participants described their coping strategies, such as avoidance, and how they specifically sought help to overcome these challenges (Mamaril, 2023). Willis (2022) introduced a model for identifying the traits of toxic leadership. The absence of accountability for leaders entrusted with caring for subordinates is worrisome. Willis (2022) proposed an enterprise-scale definition of toxic leadership and a feedback mechanism to counter toxic leaders when introduced. The armed services did not implement these solutions.

As only a niche sect of the population serves in the military, the existing hegemony has failed its service members (Barrett, 1996). Barrett (1996) contended that the hegemony present in the U.S. Navy favors young males. Despite the military's claims to value diversity, the actual practice is lacking (Barrett, 1996). This toxic masculinity has been at the forefront of events related to Vanessa Guillen's disappearance and death. Vanessa Guillen was murdered in 2020 by a fellow service member (Diaz et al., 2022). The cover-up surrounding her murder sparked outrage about the treatment of women in the military (Diaz et al., 2022). Women were prohibited from serving in combat until 2013 (Votava, 2013). This prohibition is another example of men's attempted hegemonic dominance over women (Votava, 2013).

Examining how an organization retains talent in a hegemonic environment can provide clues to the hegemony. McMahon and Bernard (2019) discussed how the military recruits and retains for the Naval War College. Their work broadly pointed the blame on the youth of America who cannot qualify for military service (McMahon & Bernard, 2019). Glaser (2011) offered a different perspective on retaining talent in the military. Glaser (2011) found that officers who receive higher marks in their performance evaluations tend to separate from service at a lower rate than their counterparts who score lower. The civilian job market has an external impact on military retention (Glaser, 2011). Cunha et al. (2015) examined the Army's recruiting challenges in their work. Like McMahon and Bernard (2019), their analysis predominantly focused on the recruits, not the organizational influences that may affect their decisions to continue to serve (Cunha et al., 2015).

Maley and Hawkins (2018) analyzed military recruiting and retention. Common elements emerged by analyzing recruits' socioeconomic, cultural, and historical perspectives. Casual factors in enlistment were age, gender, racial composition, and educational level (Maley & Hawkins, 2018). The researchers found that those from disadvantaged socioeconomic backgrounds, those graduating high school, males, and people of color were more likely to join the military (Maley & Hawkins, 2018). Some may construe these causal links as the military purposefully preying on those with no better alternative for their futures. (Maley & Hawkins, 2018). Squier (2017) expanded on Maley and Hawkins's (2018) research by examining the relationship between cognitive ability and job assignment in the U.S. Navy. Squier (2017) quantitatively examined recruits' scores on their entry-level testing with retention levels for those service

members. Squier (2017) found that cognitive fit was not a predictor for retention, meaning the U.S. Navy was not placing recruits into their best fit for the job.

Examining senior leadership illuminates the hegemony in the U.S. Navy. Nissen and Tick (2018) examined officer retention in two distinctive naval communities: information warfare and surface warfare. The two communities offered different takes on the homogeneity of their talent pools (Nissen & Tick, 2018). This difference presents a unique challenge in the retention of talent. One organization with different subsects has historically struggled to cobble together a strategy to retain the best talent (Nissen & Tick, 2018). Literature on hegemony in the U.S. Navy indicates that the armed services cater to a predominately White male base while taking advantage of underprivileged youth to fill the ranks (Barrett, 1996; Cunha et al., 2015; Glaser, 2011; Maley & Hawkins, 2018; McMahon & Bernard, 2019; Nissen & Tick, 2018; Squier, 2017). The structure of the military often allows young men to succeed, exhibits toxic masculinity, cannot place recruits into jobs that fit them cognitively, and does not formulate a coherent strategy to retain their talent (Barrett, 1996; Connell, 1987, 1995; Hinojosa, 2010; Maley & Hawkins, 2018; Squier, 2017).

Training Ideology

The U.S. Navy, foreign navies, and all civilian crews operate extensively at sea. Approximately 90% of global trade transits via sea shipping (Gourdon & Steidl, 2019). The Motor Vessel ACX Crystal and Alnic MC crews were civilians. There are few documented incidents with civilian crews. This reactive stance hinders the effectiveness of the training imparted. In researching training ideology, a strong foundation in andragogy developed. Civilian maritime training centers on two principles: simulator

training implementation and crew resource management development. Researchers widely heralded simulator training as the proverbial next frontier for mariners to train (Renganayagalu et al., 2019; Sanfilippo, 2017; Sellberg, 2018; Tvedt et al., 2018; Wahl, 2020). Military training ideology focuses on the review of training systems already in place (Griffioen et al., 2021; Neigel & Priest, 2018; O'Connor, 2011; O'Connor et al., 2008; Shobe & Curtis, 2007; Vranich, 2020). In the following sections, I share literature related to civilian and naval training ideologies and the usage of simulators in maritime training.

Civilian training ideology. The ideology of civilian maritime training is to develop the abilities of the seafarers so that they are best prepared to carry out their responsibilities (Renganayagalu et al., 2019; Sanfilippo, 2017; Sellberg, 2018; Sellberg et al., 2018; Tvedt et al., 2018; Wahl, 2020). Placing mariners in simulator-based training allows them to engage in realistic scenarios to hone their skills as if they were out to sea on their ships (Sellberg, 2018). These simulators maximize the training value offered. Sellberg (2018) has been at the forefront of research in this area. Sellberg et al. (2018) shared that instructors who utilized debriefings where they reconstructed lessons learned during simulator work allowed students to reflect better upon the studies undertaken. Hébert (2015) showed that thinking does not indicate self-actualization in the learning process. Schön (1987) showed that students must first gain initial knowledge in their field to be able to reflect "on the tacit knowledge implicit in their own performance" (p. 88). The conclusions from this research underscore the importance of simulator training in a field where functional training is challenging to replicate.

The civilian sector appears to be outpacing its military counterparts in adapting non-traditional training and evaluation methods for their mariners (Kunieda et al., 2019; Liu et al., 2020; Murai et al., 2009; Shobe & Curtis, 2007). Murai et al. (2009) argued that measuring salivary amylase could predict stress levels. Salivary amylase is the body's reaction to stress, is easy to measure in real-time, and can serve as a warning for declining performance (Murai et al., 2009). Kunieda et al. (2019) studied dual language education and measured the effectiveness of the training and if performance increased. Japanese students learned an anchoring exercise in their native language and subsequently only in English. The performance for the second evolution outpaced the initial training (Kunieda et al., 2019). The researchers concluded that repetition in their instruction, regardless of language, improved student performance (Kunieda et al., 2019).

Like Murai's (2009) study, Liu et al. (2020) offered a model with an electroencephalogram (EEG) apparatus for mariners to wear during training. By combining brain activity during training with the training video, the evaluators were to construct a holistic evaluation system of a trainee's performance (Liu et al., 2020). Liu et al. (2020) called for further research to develop unique algorithms as their initial model lacks the depth of research necessary for comprehensive implementation.

Naval training ideology. Chatham (2009) highlighted the inherent challenge of military training ideology, stating, "They must constantly train everyone in their workforce in the face of a continuing turnover of personnel, which results in a new person in every job every three years or so" (p. 29). Chatham (2009) highlighted the ideological challenges and the fiscal constraints. The sheer scale of training thousands of

service members harms the bottom line of increasingly tight budgets and the logistics of leading training of this magnitude (Ericsson, 2009).

A secondary finding from the NTSB review of the USS Fitzgerald and USS John S. McCain collisions was the ineffectiveness of the service members in working as a team through the problems encountered during the difficult circumstances of the accidents (NTSB, 2019, 2020). Crew resource management (CRM) originated from the principle that applying practical communication skills and resource management during daily operations will enhance a crew's safety (Griffioen et al., 2021). Though implemented during the research, only two-thirds of the respondents that their organizations used CRM principles (Griffioen et al., 2021).

Griffioen et al. (2021) suggested a behavioral marker system for student evaluation. O'Connor and Long (2011) advocated for such a system for implementation in the U.S. Navy more than a decade ago. The authors sought to develop a system that evaluates officers' non-technical skills. Seventeen sets of skills spanning three realms: cognitive, social, and personal resources were mandated and examined (O'Connor & Long, 2011). O'Connor and Long (2011) warned, "identifying, training, and giving feedback on the non-technical skills required for safe and effective performance will ensure that civilian and military service members have the appropriate skills for minimizing, catching, and mitigating error before it leads to a mishap" (p. 1386). O'Connor (2011) later examined the effect of CRM on service members and postulated that the U.S. Navy's CRM application did not have the intended impact on their watch teams. In studying CRM application, O'Connor (2011) isolated two communities within the U.S. Navy: aviators and surface warfare officers (SWO). O'Connor (2011) found that

aviators were more receptive to CRM principles than SWOs and more likely to apply them to their professional settings.

When examining military training ideology, a transparent feedback mechanism does not exist for the service members in training. In a thesis for Naval Postgraduate School, Vranich (2020) offered a streamlined model for surface warfare officers to complete their training. The proposed model predicts an organization that recognizes problems and attempts to correct the future direction. Shobe and Curtis (2007) examined the rigors of evaluating training assessments in the military. The researchers concluded that due to the cutting-edge nature of military operations, there is often insufficient data to effectively gauge training effectiveness (Shobe & Curtis, 2007). Additional research about military training ideology is necessary to serve service members in the future better.

Examining the decision-making in military training ideology, McNab and Angelis (2014) conveyed how a change in the training model related to the AN/SQQ-89 sonar system impacted the fleet's service members (McNab & Angelis, 2014). In 2003, the U.S. Navy transitioned from the traditional instructor-led model to the learner-centric computer-based training (CBT) model (McNab & Angelis, 2014). The authors sought to employ quantitative data to investigate the consequences of this decision. McNab and Angelis (2014) pointed out the U.S. Navy's argument that lowering the cost of training while improving the capacity of training service members would benefit the service. The researchers scrutinized three dependent variables: the price of parts to correct a system degradation, the number of personnel hours necessary to correct a system casualty, and the number of maintenance actions written to document corrective actions taken against

the system (McNab & Angelis, 2014). By examining these three dependent variables against the fleet of ships in use, McNab and Angelis concluded that the shift from instructor-led training to CBT has adversely impacted the force. Maintenance costs have risen by an aggregate of $5000, while maintenance personnel hours have increased by 20–50% (McNab & Angelis, 2014). McNab and Angelis (2014) revealed that the money saved on training costs is passed to the ships to reduce their systems' capability from ill-trained service members. This study highlighted that the decision-making in the U.S. Navy regarding training is questionable at best.

Simulator training usage. The U.S. Navy has shown a limited capability to apply simulator training to maritime training successfully. Neigel and Priest (2018) showcased how Landing Signal Officers hone their skills while enhancing safety and preserving the resources necessary for training. The usage of virtual and augmented reality in their study is another example of where the military lags behind the civilian sector in applying technology due to budgetary constraints.

British flight deck officers piloted virtual environment technology in their training shortly after the turn of the century (Sastry et al., 2000). A trainer surrounded service members with audio and visual cues to practice their craft (Sastry et al., 2000). Flight deck operations incorporate hand signals for communication between the aircraft and the personnel aiding them in landing. The hand signals used during their operations are practiced for accuracy by this trainer (Sastry et al., 2000). This technologically primitive trainer established a foundation for the success of subsequent trainers.

A comprehensive review of the application of military training by Blacker et al. (2019) advocated the need for intervention regarding training ideologies employed by the

military, specifically cognitive intervention such as video games, working memory, and executive function areas. The risk of wasting time during training is not unique to the military, but the application of the military profession amplifies the effects of the wasted time during training (Blacker et al., 2019). An academic class that wastes time does not have to worry about their counterparts from different nations training to defeat them more efficiently. Blacker et al. (2019) underscore the criticality of military training due to the mortality inherent to the sector. Improving training will strengthen the military and the country (Blacker et al., 2019).

The dedication to computer-based training has shown limited potential in practice. The Office of Naval Research sponsors game-based training at Recruit Training Command (Hussain et al., 2012). Hussain et al. (2012) examined game-based training and found that this training allows service members to apply the material covered during lectures practically. Hussain et al. (2012) distilled the learning objectives necessary for real-world application for incorporation into the game. This design facilitates an instructional strategy that assesses the service members' grasp of the material. Hussain et al. (2012) discovered that this approach increased the cognitive and procedural skills of the service members who undertook their training.

In a similar study in 2014, the U.S. Navy revised training for corpsmen who function as medics. Four hundred thirty-four service members piloted a new Infantry Immersion Trainer (IIT) (Booth-Kewley & McWhorter, 2014). Charged with providing lifesaving care for ground personnel, corpsmen assimilating skills during training is critical. The purpose of the IIT is for corpsmen to practice these skills in real-life scenarios (Booth-Kewley & McWhorter, 2014). At the time, no other simulators offered

the combination of sights, sounds, smells, and real-life actors to deliver training scenarios for service members to hone their skills (Booth-Kewley & McWhorter, 2014). Booth-Kewley and McWhorter (2014) analyzed course reviews of the students' experience and found that the service members trained at the IIT offered glowing reviews. Booth-Kewley and McWhorter (2014) expressed the need for additional research into this form of training due to the feedback from the service members.

Andragogy and Apprentice-Level Training

Apprentice-level training faces a unique set of challenges. Apprentices often face limitations due to their lack of expertise, disposable income, or available alternatives (Fudenberg & Rayo, 2019). The far-reaching implications of apprenticeship programs demand an examination of how to structure a compelling experience for apprentices. Gallup (2020) conceptualized how to structure best an apprenticeship model that fulfills both the mentor and apprentice. Gallup's (2020) model is four-tiered: (a) design contextualized curriculum and instruction collaboratively, (b) consider much more than job skills in your instructional design and delivery, (c) own your expertise and advocate for learners with differences, and (d) hold the line for a truly worker-centered apprenticeship. Educational design and a learner-focused culture drive each aspect of Gallup's (2020) recommendations. Comparing existing apprentice-level training for commitment to this model provides benchmarks for efficacy. In the following sections, I share literature related to the foundations of andragogy, apprenticeship-level training in medicine, apprenticeship-level training in education, apprenticeship-level training codified in legislation, and apprenticeship-level training in the military.

Foundations of andragogy. Understanding the principles surrounding adult learners requires an extensive review of andragogy. Three formative studies catalyzed andragogy, or the method of teaching adult learners (Merriam & Bierema, 2014). Thorndike et al. (1928)was the first study specifically suited to showcase adult learners (Merriam & Bierema, 2014). More recently, Houle (1961) reported on an analysis of 22 adult learners learning motivators, and Tough (1971) focused on self-directed learning in adults. Around that same time, Malcolm Knowles (1970) introduced andragogy. Knowles (1984b, 1984a) offered the following six assumptions about adult learners: self-concept, learning from experience, readiness to learn, application of learning, internal motivation, and need to know.

Synthesizing the works of Knowles (1980, 1984a, 1984b), Maslow (1970), and Rubenson (1998) aided in understanding the science of andragogy. Self-concept, readiness to learn, internal motivation, and need to know are critical in adult learners' motivation. Maslow's (1970) self-actualization ties directly to Knowles's assumptions about andragogy. Rubenson's (1998) theory that the necessity of their professional landscape is critical to understanding adult learners.

Apprenticeship-level training in medicine. The medical field's well-established apprenticeship phase is an example for other sectors. Sinclair (2020) illuminated how doctors must undergo three distinct phases before practicing independently. The first phase lasts two years, the second phase lasts three years, and the final phase lasts one year (Sinclair, 2020). This apprenticeship does not account for the undergraduate degree or medical school a potential doctor completes. The consistency in this apprenticeship-level training model offers advantages other professions do not enjoy, such as the ability

to maintain infrequently used skills while maintaining a high level of safety (Kalaniti & Campbell, 2015). These advantages allow for a consistent knowledge base applied across the workforce.

Erlam et al. (2018) examined a population of 161 nurses to highlight the impact of the effectiveness of pedagogical practices on student nurses. The researchers polled their students on how they would change the instructional approaches used by faculty in their nursing education courses. Their nursing program made heavy use of simulation training environments for teaching. The researchers wanted to maximize student performance in four critical areas: knowledge acquisition, skill development, critical thinking, and communication (Erlam et al., 2018). The researchers offered that the millennial students responded more favorably to educators who were more accessible to their needs and concerns about difficulties encountered in class (Erlam et al., 2018). Millennials were also more receptive to modeling their behaviors from their teacher's approaches to simulated environments (Erlam et al., 2018). These pedagogical revelations offer a blueprint for effectively stimulating students' motivation to learn and self-directed learning. The blueprint proposed by Erlam et al. (2018) included "approaches which maximize repetition, modeling, immersive feedback, and effective communication tend to be favored by millennial students" (p. 140). Erlam et al.'s (2018) blueprint maximized the educational value of the courses that were the focus of the study.

In another study, Vasant et al. (2018) highlighted the importance of apprentice-level training related to medical professionals' ability to recognize and treat patients. Neurogastroenterology and motility (NGM) diagnoses affected 50% of patients seen across ten hospitals, yet no apprenticeship training existed for medical professionals to

expand their ability to recognize and effectively treat patients. Vasant et al. (2018) highlighted an apprenticeship program's effectiveness in NGM. After the implementation of a one-month apprenticeship training program for twelve trainees, the medical professionals gained a "good working knowledge of the indications, learned the basic skills on how to interpret a variety of motility investigations, and gained a comprehensive approach towards evaluating patients" (p. 11) they previously lacked.

Pinelli et al. (2018) showcased the effectiveness of apprenticeship-level training in a study of 24 pharmacists preparing for individual care roles. The researchers conducted 90-minute semi-structured interviews after the participants completed the training proposed by Pinelli et al.'s (2018) model. These studies offered evidence that underscored the criticality of apprenticeship-level training to an individual's development.

Apprenticeship-level training in education. Pre-service teachers undertake another apprenticeship-like track to their chosen teaching profession. Larkin and Maloney (2019) illustrated how school systems prepare pre-service teachers by exposing them to the intricacies of school system finances. This form of apprenticeship fosters a deeper understanding of the decision-making processes associated with an educator (Larkin & Maloney, 2019). Cabral (2018) pointed to the inequity of time afforded to pre-service teachers before entering their classrooms. Whereas most professions require 2,000 hours before independent service, many teachers only complete 560–640 hours of pre-service teaching (Cabral, 2018). Crowe and McGarr (2022) also emphasized the criticality of the apprenticeship portion of a pre-service teacher's development.

Investing in pre-service teachers and their improvement is critical to the longevity of the profession. Vagi et al. (2019) examined the dynamics of improving pre-service teacher quality. Vagi et al. (2019) examined the development of 1283 pre-service teachers and their development throughout their residency. For their study, Vagi et al. (2019) highlighted how age, race, and college grade point average affect an educator's development. Clark and Newberry (2019) studied 783 pre-service teachers across nine programs attempting to offer a model to accurately gauge if a correlation existed between the quality of the educators' pre-service period and their self-efficacy. Verbal persuasion, among other traits, contributed to pre-service teachers developing a sense of self-efficacy (Clark & Newberry, 2019). The quality of an educator's pre-service period contributes to their self-efficacy, which in turn helps those educators achieve self-efficacy during their careers (Clark & Newberry, 2019).

Continued technological evolution can confound pre-service teachers struggling to complete their residency. Heredia and Fisher (2022) studied utilizing apprenticeship programs to overcome this challenge. Five pre-service teachers participated in a makerspace apprenticeship for two semesters focused on properly leveraging these technologies in the classroom. Heredia and Fisher (2022) collected interview and observational data and concluded that the five pre-service teachers developed expertise in maker technologies for future classroom implementation through immersion.

Apprenticeship-level training codified in legislation. Lerman (2010) showcased how the United States lags behind the international community in the proliferation of apprenticeship programs. Jenkins (2022) advocated expanding a strong apprenticeship network to combat a burgeoning skills gap in the United States. In a report to the

Education Commission of the States, Whinnery et al. (2019) illuminated that few legislatively codified apprenticeship paths exist at the state level. Due to the limited availability of domestic examples, I showcase international programs in the following paragraphs.

Codifying apprenticeship programs in legislation can offer a ripe apprenticeship path for those interested in pursuing long-term employment. Jansen and Pineda-Hererro (2019) showcased how Spanish firms view apprenticeship training programs as a means to ensure a steady supply of prepared workers to fill vacancies. Interestingly, this investment is less vested in losing stockpiled talent and more in developing positive synergies among the talent pool (Jansen & Pineda-Herrero, 2019). Direct mentorship was pivotal in Jansen and Pineda-Herrero's (2019) study, highlighting the need for human interaction feeding the apprenticeship model.

Albanese et al. (2021) stressed how legislation changes combated high unemployment levels among the youth in Italy. Reforms enacted in 2003 codified minimum pay and allowed mentor providers to train their apprentices on-site. This apprenticeship system is not an extension of formal training but a collectively bargained employment option (Albanese et al., 2021). These changes allowed for a fertile system for younger professionals to grow. The Swiss apprenticeship model mirrors its Italian counterpart (Di Maio et al., 2020). Di Maio et al. (2020) exposed how Switzerland based its model on firm involvement in their apprenticeship. The Swiss's fundamental reform involves shifting from governmental control to their employers (Di Maio et al., 2020). Di Maio et al. (2020) proposed that this shift aims at creating higher levels of social inclusion among those who have completed their apprenticeship tracks. Rupietta and

Backes-Gellner (2018) corroborated the Swiss system through statistical analysis. Through their analysis, Rupietta and Backes-Gellner (2018) also found that firms who participate in apprenticeship programs innovate on a higher level than firms who do not.

Apprenticeship-level training in the military. Highlighting the importance of efficiency in military training where cognitive function is critical, Vogel-Walcutt et al. (2010) offered best practices for increasing the efficiency of military learning. Offering that fine-tuning the military's current simulations to maximize their training efficiency, Vogel-Walcutt et al. (2010) indicated that the military focused too much on the technology in the classroom to the detraction of the lessons. Another point of contention highlighted was instructional overload (Vogel-Walcutt et al., 2010). Minimizing disruptions in the classroom, namely the assessment portion, is of critical pedagogical importance (Vogel-Walcutt et al., 2010). These two areas show potential improvement in the military training efficiency model.

Vogel-Walcutt et al. (2013) encouraged a framework in which research-based practice drives instructional strategies when investigating instructional strategies in a military environment. The overuse of technological systems is partly to blame for the current training struggles due to ineffective training strategies (Vogel-Walcutt et al., 2013). Rather than continuing to invest resources in failed training systems, Vogel-Walcutt et al. (2013) suggested that military training ideology shifts to a learner-centered approach. Namely, the instructional strategies suggested focusing on three phases: pre-training strategies, during-training strategies, and post-training strategies (Vogel-Walcutt et al., 2013). The framework presented highlights a lack of focus on basic pedagogical

principles (Vogel-Walcutt et al., 2013). This fundamental disregard for the foundations of andragogy underscores the need for further research in this sector.

Edgar et al. (2013) advocated for a formal mentorship during Army doctors' residency phase, as no program existed. This gap during a doctor's apprenticeship-training phase impacted the quality of care available to patients while also stunting the professional development of doctors (Edgar et al., 2013). Edgar et al. (2013) expressed short- and long-term goals to close this gap. First, establishing a formal mentorship program. Second, train mentors for the apprentice doctors. Finally, expand the mentorship program to a coaching program to run concurrently with the mentorship program. Edgar et al. (2013) aimed to enhance their doctors' tactical, operational, and strategic development during the critical apprenticeship portion of the doctors' residency.

The military offers an apprenticeship model for service members to meld their skills with the civilian sector, termed the United States Military Apprenticeship Program (USMAP; Hanson & Lerman, 2016). The program is popular among service members enrolled, accounting for 20 percent of registered apprentices in the United States (Hanson & Lerman, 2016). In examining USMAP, Hanson, and Lerman (2016) pointed out several inadequacies in this initiative. First, service members were not competent in navigating and ultimately completing their apprenticeship (Hanson & Lerman, 2016). Second, service members' documentation was often unfinished due to the fragmented nature of military service (Hanson & Lerman, 2016). Finally, employment recruiters often were not competent in USMAP. This lack of competence makes translating military skill sets to civilian jobs difficult and hinders follow on employment (Hanson & Lerman,

2016). The inadequacy of USMAP further illuminates the lack of training in the U.S. Navy.

Synthesis of Literature

The literature review consisted of four parts: (a) motivation in academic settings, (b) hegemony in the U.S. Navy, (c) training ideologies in civilian and naval maritime training, and (d) andragogy and apprentice-level training. Examining motivation in academic settings is vital (Dishon-Berkovits, 2014; Houle, 1961; Kaplan et al., 2012; McClusky, 1963, 1970; Rueda & Moll, 1994; Sogunro, 2014; Wlodkowski, 2008). These principles blended together offer perspectives for best engaging learners.

In reviewing hegemony in the U.S. Navy, I presented research that showed that the armed services struggle with recognizing the implications of their decisions upon their service members. The U.S. Navy is a service dominated by those who sometimes do not value diversity in its ranks or its approach to training its service members (Barrett, 1996; Connell, 1987, 1995; Hinojosa, 2010). Research on service members' perception of their training would benefit the stakeholders who make decisions about the future of naval training.

There are stark differences in comparing civilian and naval maritime training ideologies. Civilian maritime training seeks and relies upon the best methodologies (Renganayagalu et al., 2019; Sanfilippo, 2017; Sellberg, 2018; Sellberg et al., 2018; Tvedt et al., 2018; Wahl, 2020). Civilians use cutting-edge technology and unconventional methods to train their employees (Renganayagalu et al., 2019; Sanfilippo, 2017; Sellberg, 2018; Sellberg et al., 2018; Tvedt et al., 2018; Wahl, 2020). Previous

research showed that if proper training initiatives had been in place for the U.S. Navy, these mishaps could have been prevented (O'Connor & Long, 2011).

Andragogy and apprentice-level training are major focus areas of this study. Adult learners function best when the instruction addresses the six andragogy principles (Knowles, 1980, 1984a, 1984b; Maslow, 1970; Merriam & Bierema, 2014; Rubenson, 1998). If not adhered to, educators risk the outcome of the training process for their adult learners. Examination of the literature illuminated potential improvements to the processes used to train the service members. The literature review revealed the origins of andragogy (Houle, 1961; Knowles, 1980, 1984a, 1984b; Merriam & Bierema, 2014; Rubenson, 1998; Thorndike et al., 1928; Tough, 1971). The literature review highlighted the responsibility of the educator to be adequately prepared to reach their students (Erlam et al., 2018; McKenney & Mor, 2015). McNab and Angelis (2014) concluded that switching to computer-based training ultimately cost the U.S. Navy unanticipated maintenance costs for service members who could not repair their equipment. Evolving simulation trainers have shown success for the U.S. Navy as game-based training, as service members received the Immersion Infantry Trainer well (Booth-Kewley & McWhorter, 2014; Hussain et al., 2012).

In this literature review, I highlighted the U.S. Navy's missteps in several training decisions. Those who decide about Naval training and the service members undergoing training would benefit from additional research exploring the U.S. Navy's training ideology. To research the perceptions of the U.S. Navy's apprenticeship-level training, I used Deci and Ryan's (1985) self-determination theory to examine service members' motivation in their training.

Theoretical Framework

The theoretical framework for this study was Deci and Ryan's (1985) self-determination theory. Deci and Ryan (2012) defined self-determination theory as "an empirically derived theory of human motivation and personality in social contexts that differentiates motivation in terms of being autonomous and controlled" (p. 416). Self-determination theory comprises three aspects for motivation and growth: autonomy, competence, and relatedness (Ryan & Deci, 2000). Figure 1 displays the three aspects of self-determination theory.

Figure 1. Deci and Ryan's (1985) self-determination theory.

A learner's need to feel autonomous in their growth directly correlates to their ability to become self-directed (Deci & Ryan, 1985). Self-direction is the desired outcome, as a self-determined learner will experience growth or change at a higher level than a non-self-determined learner (Deci, 1975). Achieving a high level of autonomy catalyzes motivation (Deci & Ryan, 1985). Deci and Ryan (2000) defined competence as a "desire to feel effective when interacting with the environment" (p. 982). Niemiec and Ryan (2009) described competence as "the need to experience our behaviors as

effectively enacted" (p. 135). When people gain mastery of skills and knowledge, their sense of competence and self-determination grows (Niemiec & Ryan, 2009; Ryan & Deci, 2000). Relatedness is the connection or community fostered among people (Deci & Ryan, 1985). People seek help and support in their lives. Without this feeling of connection or community, self-determination is harder to achieve (Deci & Ryan, 1985). Baumeister and Leary (1995) concluded that "human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (p. 497). People can achieve higher motivation by fostering connection or community with others (Deci & Ryan, 1985).

Self-determination theory's application to academic standing is well-documented (d'Ailly, 2003; Deci et al., 1999; Guay, 2022). Deci et al. (1999) analyzed 128 studies using self-determination theory and concluded that tangible rewards harm intrinsic motivation. They offered that intrinsic motivation tends to decrease a student's self-regulation as they become driven by the reward, not the process itself (Deci et al., 1999). Guay (2022) presented a similar literature review of 46 studies concerning the processes and application surrounding self-determination theory in education. Guay (2022) concluded that a higher achievement level of student autonomy correlates to more remarkable performance. Guay's review supported using self-determination theory in classrooms.

Two researchers offered different theories related to motivation: Skinner and Bandura. Skinner's (1950) theory of learning concluded that a person's motivation is related to their environment. Skinner rejected Deci and Ryan's argument that motivation is solely an intrinsic force. Bandura (1977) introduced social cognitive theory. Bandura's

theory focuses on external and internal influences on an individual's motivation rather than solely on internal motivation. However, self-determination theory was the best fit for this study because the framework includes three aspects to explore through the lens of a learner's perceptions. These aspects address both internal motivators and external responses to the environment.

Conclusion: Purpose of the Study and Research Questions

The purpose of this single case study was to explore five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory. I investigated how the U.S. Navy motivates students. These students are service members who operate at sea, so they have few resources available when tragedy strikes. To overcome adversity, service members' training must be sound. Three research questions guided the study:

1. How do U.S. Navy service members describe their autonomy in their initial apprenticeship training?
2. How do U.S. Navy service members describe the competence gained from their initial apprenticeship training?
3. How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training?

This study is significant to me, the United States, and American strategic interests. The U.S. Navy must operate where no other military branch can for America to remain a global leader. Public trust in their military must not waver. This study's findings can potentially inform the next generation of training in the U.S. Navy. Training service members to their highest capabilities is essential to ensure the freedom of navigation and international commerce.

In Chapter One, I defined the problem statement, literature review, theoretical framework, and research questions for my study. In Chapter Two, I share the research design and methodology used during my study. I describe my perspective and positionality, the application of self-determination theory as the theoretical framework for the study, participant selection, data collection, data analysis procedures, trustworthiness and authenticity, ethical considerations, and limitations and delimitations.

CHAPTER TWO

Methodology

Introduction: Research Questions

In light of the literature review, this study focused on active-duty U.S. Navy service members' perceptions of their apprentice-level training. Motivation in academic settings is critical for student engagement and success (Dishon-Berkovits, 2014; Glynn et al., 2005; Houle, 1961; McClusky, 1963, 1970; Rueda & Moll, 1994; Sogunro, 2014; Wlodkowski, 2008). The military is rife with hegemonic disadvantages for service members (Barrett, 1996; Connell, 1987, 1995; Cunha et al., 2015; Diaz et al., 2022; Glaser, 2011; Hinojosa, 2010; Maley & Hawkins, 2018; McMahon & Bernard, 2019; Nissen & Tick, 2018; Squier, 2017; Votava, 2013). In comparing civilian vice military training ideology, the military's ideology lags behind its counterparts (Booth-Kewley & McWhorter, 2014; Ericsson, 2009; Kunieda et al., 2019; Murai et al., 2009; Neigel & Priest, 2018; Renganayagalu et al., 2019; Sanfilippo, 2017; Sastry et al., 2000). Examining the foundations of andragogy and apprenticeship-level training showcased the criticality of apprenticeship-level training (Erlam et al., 2018; McKenney & Mor, 2015; Vogel-Walcutt et al., 2010, 2013). A thorough understanding of adult learners' motivation in academic settings aided me in designing this study. In this single case study, I explored five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory.

Those who make decisions about Naval training and the service members undergoing training can benefit from knowing more about the perceptions of motivation during training. As such, I designed this study to explore five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory. The following research questions guided the study:

1. How do U.S. Navy service members describe their autonomy in their initial apprenticeship training?
2. How do U.S. Navy service members describe the competence gained from their initial apprenticeship training?
3. How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training?

Researcher Perspective and Positionality

As an active-duty service member, I have deep personal connections with this research. Having served in the U.S. Navy for more than 21 years, my experience gives me insight into how it trains its personnel. I have served on ships like the USS Fitzgerald and USS John S. McCain for over 12 years. Losing any service members is significant. Tearing apart the bonds formed among a crew leaves an indelible mark on everyone around them. During the time of the incidents, I was in Japan. The somber mood that hung over Japan during the fallout from the accidents will stay with me for the rest of my life. I distinctly remember watching the population of the entire naval station lining the streets for the procession of the bodies of the fallen sailors. Distilling service members' perceptions of their motivation related to their training allowed a path forward in correcting any impractical habits for motivating and training.

My experiences in the U.S. Navy and my distinct memories make the research topic and the subsequent findings deeply meaningful. These experiences lead to a potential researcher bias in the data collection and analysis. The study serves to highlight potential pitfalls for future service members to overcome in the future. Because this research is meaningful, I worked to mitigate my potential researcher bias. Utilizing a holistic approach to data collection and analysis assists in mitigating bias.

Stemming from my pragmatic worldview, I sought to address a problem with real-world practical examples (Creswell & Poth, 2018). I developed the idea for this research after the consequences of the USS Fitzgerald and USS John S. McCain collisions. Creswell and Poth (2018) influenced me to focus on the problem and the possible solution. This study's potential long-reaching effects also influence the pragmatic nature of the study. Cherryholmes (1992) and Murphy and Rorty (1990) supported the notion that researchers must examine the "what" and the "how" during their research. The consequences of the research must remain at the forefront of the study (Cherryholmes, 1992; Murphy & Rorty, 1990). By remaining conscious of their goals using a pragmatic worldview, researchers effectively offer solutions to their problems (Cherryholmes, 1992). To accomplish this goal, I remained cognizant of my goal to provide information to those who make decisions about Naval training. Using Deci and Ryan's (1985) self-determination theory as this study's theoretical framework helped me accomplish this goal.

Theoretical Framework Application

Deci and Ryan's (1985) self-determination theory guided this study. Self-determination theory seeks to understand student motivation through three factors:

autonomy, competence, and relatedness (Deci & Ryan, 1985). Deci and Ryan (1985) indicated that motivation is critical in human development. The purpose of this single case study was to explore five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory.

Self-determination theory catalyzed the research questions, as I sought to explore how autonomy, competence, and relatedness influenced service members' training. Deci and Ryan's (1985) examination of motivation in an academic setting directly influenced the research questions. Each research question focused on one of the three aspects of the theoretical framework. For example, in the first question, I focused on autonomy. In the second question, I focused on competence. In the third question, I focused on relatedness. It is essential that training prepares service members to perform their dangerous duties at sea where they, alone, can save themselves. Thus, it is vital to learn more about service members' perceptions of their training through the lens of self-determination theory.

This framework also informed my data collection related to training experiences, thereby influencing the data sources. I included three data collection protocols: a questionnaire, individual interviews, and one focus group interview. I utilized semi-structured interviews and a focus group interview to gauge students' perceptions of the training and how well it prepared them for their time at sea. Deci and Ryan (1985) wrote about self-determination theory in the academic setting. I aligned the questions in all of the data collection protocols with the theoretical framework. For example, in the questionnaire, I asked the respondents to describe if the individual aspects of self-determination theory were present during their training experience across.

Deci and Ryan's (1985) self-determination theory also informed my data analysis to explore the service members' perceptions of their training. The three aspects of the theoretical framework guided the data collection analysis, as I analyzed participants' perceptions of their autonomy, competence, and relatedness in their apprentice-level training. When collecting data, I uncovered codes, categories, and themes (Creswell & Poth, 2018). I used inductive coding during this phase to develop the codes during data analysis (Creswell & Poth, 2018).

Research Design and Rationale

Creswell and Poth (2018) offered a roadmap for designing a qualitative study, indicating that "qualitative researchers use an emerging qualitative approach to inquiry, collecting data in a natural setting sensitive to the people and places under study, and data analysis that is both inductive and deductive and establishes patterns or themes" (p. 10). A qualitative approach was best suited for my study as I observed a phenomenon (naval training) with participants in their natural settings while pursuing a narrative of their experiences (Stake, 2006). Qualitative research was the best approach to this study because the onus of the study was the service members' perceptions of their training. Exploring perceptions of the training processes necessitated a qualitative design.

A case study approach guided this study as I studied real-world examples in their natural setting (Yin, 2018). Yin (2018) explained that research questions should seek to explain the how or why of the topic of the study. The three research questions aligned with this notion. By examining the service members' perceptions of training, I gained deeper insight into the training itself. All participants were active-duty service members who had completed a course of instruction in naval training. Third, Yin (2018) described

the case study method as best suited for "holistic and meaningful characteristics of real-life events" (p. 4). The two events that inspired the study were the USS Fitzgerald and the USS John S. McCain collisions at sea. With better training, these catastrophic accidents may have never occurred. These tragedies and service members' real-world training experiences catalyzed my study. Thus, a case study approach was best suited for the case study. Table 1 showcases the research diagram for the study.

Selecting between a single case study and a multiple case study approach required careful consideration. Because all participants were active-duty service members who had completed a course of naval training, I selected a single case study approach. Yin (2018) described five justifications for selecting a single case study approach: critical, unusual, common, revelatory, or longitudinal case. As such, I studied a common case: the circumstances or conditions of everyday occurrences (Yin, 2018). This justification best represented the case in my study because I explored daily training in the U.S. Navy.

Table 1

Research Design

Phase	Procedure
Participant Selection	• Questionnaire solicited participants for the case study • Purposeful selection of five participants
Data Collection	• Interviews with the participants • Focus group interviews with the participants
Data Analysis	• Coding and analysis • Transcripts sent to participants for verification
Interpretation of Findings	• Interpretation of findings • Discussion of findings

Population and Participant Sampling

For this study, I selected participants who were part of a particular population, U.S. Navy service members. Creswell and Poth (2018) indicated that "[f]or a case study, the researcher needs to select a site or sites to study, such as programs, events, processes, activities, individuals, or several individuals" (p. 153). The participants were in different locations worldwide as active-duty service members. Thus, social media platforms facilitated the solicitation of participants. I describe the population and participant sampling in the following sections.

Population

The participants for this study included five active-duty U.S. Navy service members. U.S. Navy Diversity Equity & Inclusion (2023) published the demographics across the naval force (see Table 2). The demographic information indicated that the enlisted force included 398,911 service members. Of these service members, 214,360 identified as White, 60,153 identified as Black or African American, 20,445 identified as Asian, 57,823 identified as Hispanic, and 21,843 identified as multiple races. U.S. Navy service members' gender ratios are 79% male to 21% female.

Table 2

U.S. Navy Demographics

	White	Black or African American	Asian	Hispanic	Multiple Races
Male	176,752	42,618	16,068	43,634	16,844
Female	37,608	17,535	4,377	14,189	4,999

Enlisted service members in the U.S. Navy first enter service through basic training in Great Lakes, Illinois. After completing their basic training, these service

members continue their apprenticeship-level training, dependent on their job assignment. No matter their job assignment, they complete apprenticeship-level training. This enlisted community offered a rich population to draw from for this study.

Participants

There were two aspects of participant sampling in this study. First, I identified potential participants using social media platforms Facebook and LinkedIn. Potential participants received a questionnaire soliciting their participation in the study, collecting demographic data and information about their perceptions related to their training. Social media groups designed for connecting service members allowed questionnaires to spread widely and quickly.

Second, I used criterion-based convenience sampling to select five participants for the study. Convenience sampling is when the researcher intentionally selects participants based on the ease of access, allowing for ease of data collection (Creswell & Poth, 2018). I employed criterion-based convenience sampling in choosing my participants from the potential participants who responded to the questionnaire. This strategy of distilling potential participants from a homogenous group is a hallmark of a single case study (Yin, 2018). Creswell and Poth (2018) advised that criterion sampling should be employed when "all individuals studied represent people who have experienced the phenomenon" (p. 158). As such, the inclusion criteria were that all participants were enlisted service members who had completed their initial apprenticeship-level training. This study defined apprenticeship-level training as a service member possessing six years of service or less. For this study, I purposefully excluded officer service members and service members who completed their training more than six years before the start of the study.

The questionnaire yielded 46 responses. Of the 46 responses, 25 completed the questionnaire. From the 25 completed responses, seven met the inclusion criteria. I chose the five participants based on the timeliness of their responses. Table 3 offers further detail about the participant demographics.

Table 3

Participants' Demographics

Participant (Pseudonym)	Age	Race	Gender	Years of Service	Initial Rank	Current Rank
Amanda	33	African American	Female	6	E-1	E-5
Hudson	33	White	Male	8	E-1	E-6
Evan	33	African American	Male	3	E-1	O-3
Alison	29	White	Female	4	E-3	E-6
Darren	25	White/African American	Male	5	E-1	E-6

Data Collection

I collected data in four phases. First, I submitted to Baylor University's Office of Research Compliance for review. Second, I used a questionnaire to solicit potential participants while collecting demographic information and their perceptions of their training. Third, I conducted semi-structured individual interviews via Zoom. Fourth, I convened a focus group interview. In the following sections, I share the data collection procedures and protocols.

Data Collection Procedures

The first step in my data collection was submitting to Baylor University's Office of Research Compliance for review. I received a non-human subject research determination. Once I received the determination, I piloted my questionnaire among my peers. This strategy provided valuable feedback to strengthen the questionnaire prior to

employment. I also piloted the interview questions with service members at my local unit, checking for applicability and clarity (Stake, 2006).

In the second step, I sent the questionnaire to solicit participation in my study, collect their demographic data, and their perceptions of their training (see Appendix A). The questionnaire responses allowed me to distill the population to the participants using purposeful sampling. Responses of extreme satisfaction or dissatisfaction aided in this endeavor. I then selected five service members.

During the third step in data collection, I conducted the participant semi-structured interviews on Zoom (see Appendix B). Interviews allow the interviewer and subject to collaborate to increase their knowledge (Kvale & Brinkmann, 2015). The goal of understanding the participant's point of view is a hallmark of an interview protocol (Kvale & Brinkmann, 2015). The goal of the individual interview in this study was to gain the participant's perceptions of their training. I used the recording and transcription features of Zoom to keep the focus on enriching the content of the interview.

During the fourth step, I facilitated a focus group interview conducted via Zoom (see Appendix D). A semi-structured format guided the focus group interview. A focus group interview allowed for dialogue between the participants (Kitzinger, 1995). The focus group interview removes potential barriers to participation as participants engage more freely with fellow participants than the moderator (Kitzinger, 1995). Table 4 shows the timeline for the study.

Table 4

Summary of the Research Plan

Time Frame	Action
April 2023	Obtained IRB determination for research. Obtained solicitations and communicated the purpose of the study.
May 2023	Contacted participants for inclusion; data collection.
May–July 2023	Conducted data analysis; wrote findings and discussion.

Data Collection Protocols

I collected data using three sources instrumental to this study: a questionnaire, individual interviews, and a focus group interview. The questionnaire I created fielded participants for inclusion while gaining demographic data and their perceptions about training (see Appendix B). McClintock et al. (1979) proposed that one intent of a questionnaire intent is to gather demographic data quickly. Posted daily over two weeks, I disseminated my questionnaire via the social media platforms Facebook and LinkedIn to identify potential participants by gathering their demographic information and some information about their training experiences. The wide dissemination of the questionnaire offered a variety of potential participants.

A semi-structured interview with each participant allowed me to dialogue with each participant (Galletta, 2013). I crafted seven interview questions to learn more about the participants' perceptions of their training (see Appendix C). The interviews lasted 30 to 45 minutes each in length. The versatility of the semi-structured format was an asset to the study (Kallio et al., 2016). I gained a deeper understanding of the participants' perceptions using the semi-structured format.

The focus group interview included all five participants. I created five focus group interview questions to foster discussion among the participants so that I could determine if their perceptions revealed commonalities about their initial apprenticeship-level training (see Appendix D). The focus group interview on Zoom enabled participants to interact with one another, allowing me to explore further any commonalities in their interviews (Pascall et al., 2009). The focus group interview lasted for 90 minutes. Table 5 demonstrates the relationship between the research questions, the theoretical framework, and the data sources I selected for this study.

Table 5

Research Questions, Theoretical Framework, and Data Source Alignment

Research Question	Theoretical Framework Element	Data Source and Question Numbers
How do U.S. Navy service members describe their autonomy in their initial apprenticeship training?	Autonomy	• Questionnaire 9 • Interview 3, 4 • Focus Group Interview 2, 3
How do U.S. Navy service members describe the competence gained from their initial apprenticeship training?	Competence	• Questionnaire 10 • Interview 1, 2 • Focus Group Interview 1, 2, 5
How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training?	Relatedness	• Questionnaire 11 • Interview 5, 6 • Focus Group Interview 2, 4, 5

Data Analysis Procedures

Creswell and Poth (2018) described the data spiral during data analysis as an ongoing process during research. Each step of the data analysis spiral took careful

consideration to implement successfully. This process was not linear but continued to build upon each step (Creswell & Poth, 2018). Data analysis for this study required five steps. The five steps were (a) managing and organizing data, (b) reading and memoing emergent ideas, (c) describing and classifying codes in themes, (d) developing and assessing interpretations, and (e) representing and visualizing the data. Table 6 displays the procedures I followed during the study.

Table 6

Data Analysis Procedures

Step	Procedures
Managing and organizing the data	• Utilized the Zoom transcription feature to provide interview transcripts • Verified printed transcript against video recording • Manual coding
Reading and memoing emergent ideas	• Reviewed transcripts with the purpose of memoing • Developed initial codes • Revamped focus group protocols based on initial codes
Describe and classify codes into themes	• Within-case analysis • Finalized codebook
Develop and assess interpretations	• Designed contextual diagrams to aid in the reader's understanding of the findings
Represent and visualize data	• Summarized findings via tables • Used written findings to address how findings related to the research questions and the theoretical framework • Identified limitations and future implications

In the first step of data analysis, I managed and organized the data (Creswell & Poth, 2018). I utilized the transcription feature embedded within Zoom software to create transcripts of the participant interviews. After printing the transcripts, I watched the

recordings of the interviews again to ensure the transcripts' accuracy, making any corrections as necessary (Gibbs, 2007).

In the second step of data analysis, I read and memoed emergent ideas (Creswell & Poth, 2018). I reviewed the transcript data to take notes (Agar, 1980). These written notes provided an overall summary and aided in the development of codes.

In the third step of data analysis, I described and classified codes into themes as part of the within-case analysis (Creswell & Poth, 2018). Persistent categories and themes from the previous phase emerged from hand-coding. I performed three cycles of coding (Lester et al., 2020). First, I reviewed the entire data set and identified codes based on the initial review. This tactic reduced the data set by identifying the key takeaways from the interviews and the focus group interview. Second, I returned to the first set of codes assigned to further expound on these codes. Third, classifying the codes into categories and themes will allow for the emergence of patterns. Pattern matching allowed me to develop the codes into themes. Pattern matching involves comparing the predicted and observed patterns (Yin, 2018).

In the fourth step of data analysis, I developed and assessed interpretations (Creswell & Poth, 2018). Building upon the findings from the previous step, I worked to uncover the codes, categories, and themes. By reviewing the recordings of the interviews, I could isolate specific patterns for further data collection during the focus group interview. These patterns helped guide the questions for the focus group interview.

In the fifth step of data analysis, I represented and visualized the data (Creswell & Poth, 2018). As I conceptualized the themes into a coherent message, I worked to build contextual diagrams to facilitate the reader's comprehension of the analyzed data. I

constructed tables that summarized the discovered findings. I wrote findings to compare the findings to the research questions and the theoretical framework.

Trustworthiness and Authenticity

I used two measures to enhance qualitative reliability and validity: thick, rich descriptions and member checking. The qualitative reliability of a study refers to its consistency and stability (Gibbs, 2007). The qualitative validity of a study signifies that the researcher checks the study's accuracy (Creswell & Creswell, 2018). If the qualitative reliability of a study is high, future researchers should be able to replicate this study (Yin, 2018).

Rich, thick descriptions place the reader during the study (Creswell & Creswell, 2018). By providing clear descriptions during each step of the study, the researcher enhances the experience for the reader (Creswell & Creswell, 2018). I carefully reproduced the quotes from the interviews and focus group interviews in the findings. The reproduction tools inherent to data collection offer the reader rich, thick descriptions.

Researchers conduct member checking by returning their transcripts to their participants for accuracy checking (Creswell & Creswell, 2018). This technique ensures no misconception of data while ensuring the qualitative validity of the study (Creswell & Creswell, 2018). I returned the individual and focus group interview transcripts to all participants who verified the report's accuracy (Creswell & Creswell, 2018).

Ethical Considerations

I submitted to Baylor University's Office of Research Compliance for review and received a non-human subject research determination. I acquired permission via two different formats to obtain my participants' permission. I first solicited their participation

via social media. Those who chose to respond offered their permission by the response. Upon solicitation, I obtained permission through the questionnaire containing the consent form (see Appendix E). This duality of permission acquisition enabled vested study participants.

My positionality offered its own set of unique challenges to overcome. I served for more than 22 years in the U.S. Navy. This vast experience led to a significant researcher bias I had to overcome. Direct data reporting allowed me to combat researcher bias by sharing the participants' perspectives. Given my 22 years of experience, I was careful not to allow my experiences to influence my study. I accomplished this by recognizing the fresh perspective of my participants, who had three to eight years of experience, to set aside my own experiences to learn about theirs.

To further protect my participants, I took the utmost care to maintain their confidentiality throughout the study (Creswell & Poth, 2018). Pseudonyms protected the participants' identities during the interviews and the focus group interview. Participants also utilized pseudonyms while interacting in the focus group interview setting to protect themselves. I also protected the interview and focus group interview data using password-protected folders to store my collected data. Password-protected folders prevented unauthorized data disclosure. I kept the passwords to these data folders confidential from all other individuals.

Limitations and Delimitations

Researchers must diligently navigate the hazards presented to their study by limitations and delimitations. Ellis and Levy (2009) described limitations as weaknesses

in a study that are outside the researcher's control. Delimitations are intentional choices made by the researcher that may bind the study findings (Ellis & Levy, 2009).

I identified one limitation of this study. The limitation of this study was time. Relegating a doctoral dissertation to a limited amount of time resulted in a compressed timeline for data collection and data analysis. This compressed timeline gave a snapshot of the participant's perspectives during the study at one particular point in time. These limitations were threats to the study's validity. However, I maintained the study's qualitative validity through member checking and using thick, rich descriptions.

There were four delimitations for this study. The first delimitation of this study was that service members from the U.S. Navy solely comprised the participants. I sought to capture perceptions from the service in which I served. As such, I did not include service members from the other branches of the U.S. armed forces. The second delimitation of the study was the number of participants I chose to participate in the study. This study represented only five service members, which is not generalizable to the U.S. Navy. The third delimitation for this study was that all participants began their careers as enlisted service members. I excluded respondents who began their careers as officers. The fourth delimitation for this study was the time frame I selected to learn more about the participants' experiences. Though purposefully selected, the participants shared their experiences related to their apprenticeship-level stage or their first six years of service. I set this delimitation to better capture fresh perceptions of the training methods implemented. The fourth delimitation was that my study fielded participants solely through social media. Purposefully implemented, social media allowed for rapid

communication about my study. This may have unintentionally excluded service members who did not utilize social media.

Conclusion

In this single case study, I explored five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory. Ensuring service members receive adequate initial training to perform their demanding duties is paramount for survival. Perhaps additional training could have prevented the USS Fitzgerald and USS John S. McCain tragedies that spurned this study. The findings of this study have implications for not only the military but also national security. To that end, in Chapter Three, I include the findings, discussion, implications, and recommendations related to the findings.

CHAPTER THREE

Results and Implications

Introduction

This single case study allowed me to explore five active-duty U.S. Navy service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory. Five active-duty U.S. Navy service members served as participants in the study. I examined the participants' perceptions through the framework of self-determination theory (autonomy, competence, and relatedness). I reviewed the literature about motivation in academic settings, the hegemonic structure in the U.S. Navy, the difference in training ideologies between civilian mariners and the U.S. Navy, and apprentice-level training. To conduct the study, I gathered data from three sources, including a questionnaire, individual interviews, and a focus group interview to answer the following research questions:

1. How do U.S. Navy service members describe their autonomy in their initial apprenticeship training?
2. How do U.S. Navy service members describe the competence gained from their initial apprenticeship training?
3. How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training?

The study revealed three themes, which became the study's findings. First, service members did not feel autonomous during their apprenticeship-level training in the U.S. Navy particularly in job choice, the pacing of learning, and assignment and location selection. Second, service members did not feel their training provided the requisite level

of competence for their subsequent jobs. Third, the sense of community among service members is contingent upon their instructors and peers.

The presentation of the findings unfolds in five steps. First, I provide a case description of my study. Second, I detail each participant and their data as embedded units of analysis. Third, I present the within-case analysis. Fourth, I provide a discussion of my findings. Finally, I offer implications and recommendations for the related stakeholders.

Case Description

I collected data using three sources: a questionnaire, semi-structured individual interviews, and a focus group interview. I selected five participants from a pool of 46 questionnaire responses. I interviewed each participant via Zoom using a semi-structured format to encourage dialogue. I then conducted a focus group interview to allow the participants to interact with one another. All five participants were active-duty U.S. Navy service members during the study. Each participant had prior work experience before joining the U.S. Navy. Three participants were males, and two were females. Each initially entered the service at the enlisted rank of E-1 or E-3. One participant was offered the opportunity to attend the U.S. Naval Academy and was an O-3 at the time of the study. The other four participants' ranks in the U.S. Navy ranged from E-5 to E-6 at the time of this study. Their years of service ranged from three to eight years. Their ages ranged from 25 to 33 years. Two of the participants identified as White. Two identified as African American. One identified as both White and African American. I share more about each participant as an embedded unit of analysis in the following sections. Table 7 showcases the abbreviations used during the analysis.

Table 7

Embedded Unit Abbreviations

Abbreviation or Code	Definition	Explanation
A school	Accession school	First training provided to recruits after boot camp that provides the basis for their rate
ATT	Apprentice Technical Training	Foundational technical training provided before A school for FC and ET students
C school	Continuation school	Specialized training in a particular system
CIWS	Close In Weapons Systems	Machine gun weapon systems standard on U.S. Navy surface combatants
ET	Electronics Technician	Rate in the U.S. Navy that specializes in electronics
FC	Fire Controlman	Rate in the U.S. Navy that specializes in weapons systems
IT	Information Technology	Computer/telecommunication systems
NMCI	Navy Marines Corps Internet	Computer network used to provide internet services to U.S. Navy and U.S. Marine Corps service members
NEC	Naval Enlisted Code	Code assigned to sailors to classify their specialty
NSIPS	Navy Standard Integrated Personnel Systems	Computer system that houses sailors' administrative functions
MOS	Military Occupation Specialty	Code assigned to U.S. Marines to classify their specialty
PT	Physical training	Physical exercise training
Rate	Service members' occupational specialty	Two-letter abbreviation for a service member's occupational specialty
RMC	Recruiter Management Course	Course designed to provide basics to recruiting civilians into service
SPY	Army/Navy code for the radar system	Hull-mounted multifunctional radar system found on cruisers and destroyers

Embedded Unit of Analysis: Amanda

The first participant's name was Amanda (pseudonym). At the time of the study, Amanda was a 33-year-old African American female. She enlisted in the U.S. Navy at the E-1 rank. She had served for six years in the U.S. Navy and was at the rank of E-5 at the time of the study. After completing boot camp, Amanda attended ATT. After ATT, Amanda completed her FC A school. She then moved on to her C school for the SPY radar system. Her first assignment was to the USS Lassen, a destroyer like the USS Fitzgerald and USS John S. McCain.

Amanda's perceptions of autonomy in her apprentice-level training. The first research question in this study was: How do U.S. Navy service members describe their autonomy in their initial apprenticeship training? To answer this research question for Amanda, I collected data from a questionnaire, an individual interview, and a focus group interview.

When asked to describe her training, Amanda shared in the questionnaire, "Training was not self-paced. Everyone was required to keep up with the material or seek out additional assistance to not fall behind." Her questionnaire response foreshadowed other information she provided about the lack of autonomy in the interview and the focus group interview.

When asked about the autonomy level afforded her during her interview, Amanda responded, "None. I controlled my understanding of it, taking extra time to study and talk to the instructors if I needed extra help. But as for the pacing and knowledge at the right time, none." While the first half of her apprenticeship training was computer-based, an instructor led the second half.

During the focus group interview, Amanda also indicated that she was not autonomous in her job choice in the U.S. Navy, stating,

> I had no idea about any of them, so I just said, okay, I'll figure it out. I didn't know. I didn't know what ETs were. I didn't know what FCs were. I just said, okay, this is what you want me to do. I mean, I kind of got to pick up. I was conventional or Aegis because they gave me ship choices. And I was like, well, I guess I'll go to destroyer or cruiser. I guess that was kind of their way of doing it. Cause there was one set of orders that was to a carrier out in Japan. I was like, I don't want to go to Japan. So then they just kind of said, okay, well, here you go. This is what you're doing now.

Amanda's response suggested that her options were confined to selecting the location of her initial assignment. She did not want to go to an aircraft carrier, which limited her choices. Amanda's perception of autonomy during her training was overwhelmingly negative, mainly due to her limited choices related to her job and location.

Amanda's perceptions of competence in her apprentice-level training. The second research question in this study was: How do U.S. Navy service members describe the competence gained from their initial apprenticeship training? To answer this research question for Amanda, I collected data from a questionnaire, an individual interview, and one focus group interview.

When asked about the level of competence gained from her training, Amanda's offered in her questionnaire response, "The knowledge acquired from training, since it was fast-paced, did not lend itself to long-term retention. Skills were not focused on." Amanda's perceptions of competence were in line with her perceptions of autonomy.

During her interview, Amanda described her overall training experience,

> A school was kind of unmemorable. None of what I learned there really followed through to what I did on the job. C School was much more hands-on and it focused on the things that I at least recognized when I got to the fleet. Still not exactly preparing me for it, but better than A school.

Amanda shared that even though A school did not seem to apply to the tasks she did in her job, C School better prepared her for those tasks. I then asked her to single out the positive aspects of her initial apprenticeship training,

> Positive? It was, I mean, it was good to learn what I was going to see. It was good to see the equipment before just getting thrown at it. The instructors seem to want to help you to learn. Also, sometimes it just seemed like they were trying to get you to move along and get out to the fleet. But it was good to learn like how to speak to different people of different ranks, I guess, would be a positive going out there.

Amanda explained that one positive of her training was that she learned to communicate with service members in other ranks. However, she seemed evasive when I asked her about the positive aspects of her training. Sensing that she had more to share about her training perceptions, I then moved to the negative aspects of her training.

When I asked Amanda about her negative perceptions of her training, she began to describe,

> It doesn't really seem to prepare for going out and doing the job itself. Also, not really being able to work at a pace that's comfortable because it's all set out and you do it at this time, and if you don't get it, oh well, good luck in the future. So that was a little rough. And then having to kind of pull up some of the classmates that weren't catching on quickly everybody kind of one ship, one fight team, one fight.

Amanda expounded that she did not feel prepared for her duties after training. She felt rushed during her training, which prevented her from obtaining what she deemed appropriate competence. Amanda also perceived that those around her shared the same struggles related to the pace of instruction.

When asked to describe the level of competence gained from her apprenticeship training, Amanda responded, "It taught me how to work with people. I mean at least at least that way, but the training itself really just recognizing the equipment and being comfortable with putting my hands on it." When explicitly asked about the level of

competence acquired, she did not find that her training made her competent, "No, it was like surface-level understanding of everything." Amanda specifically expressed her lamentation that she felt most of her training was postponed to a later date, "Most of it. I would say most of it is like, "Oh, you'll learn this while you're actually doing it." Amanda viewed this postponement as a missed opportunity for her development.

During the focus group interview, Amanda had a specific suggestion for improving the level of competence gained from training. Her suggestion was to incorporate

> Actual troubleshooting. As opposed to, oh, find the fault and there's just a power switch that's been flipped like things that we would actually see when working in the fleet, not just nonsense. That's what you can see like right there. Not the obvious stuff, you know, like reading, reading through the long lines a little bit better than things that we'd actually use as opposed to just, Hey, you did it. Good job. Go to the fleet and figure it out.

Amanda shared that incorporating troubleshooting scenarios in training would have benefited her. When I asked if she believed the level of competence gained from her training was commiserate with her duties at sea, Amanda shook her head. Amanda did not believe her training provided her with the requisite level of competence necessary for her job.

Amanda's perceptions of relatedness in her apprentice-level training. The third research question in this study was: How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training? To answer this research question for Amanda, I collected data from a questionnaire, an individual interview, and one focus group interview.

In her questionnaire, Amanda explained the relatedness fostered during her training. She shared, "There was not much of a sense of community fostered during

training due to the highly competitive nature of the job." Amanda's perceptions of relatedness in her training were negative, which aligned with her perceptions of autonomy and relatedness.

During her interview, Amanda spoke at length about relatedness. She shared that the instructors communicated the importance of learning the content in this way:

> They told us that if other people didn't get it, then we were all going to be stuck. So I guess that was a way of kind of getting us to drag those that were behind with us. And you know, they told us that we were going to have to trust these people in the fleet with our lives because the equipment we work on is pretty dangerous. And if we didn't trust them, then it wasn't going to go well. So I guess that was how they tried to. I don't know that it worked, but they did.

It seems the instructors relied on building relatedness among the students for progression during training. Amanda perceived that she would have to rely upon people like her fellow students once she reached her first assignment. Amanda questioned the validity of this attempt to build relatedness.

I then inquired whether she perceived the relatedness as imposed or organic. Amanda seemed torn, explaining that

> It came organically to an extent, you know, also with our rate, it's like based on how you do, you get to choose where you go. And that doesn't really make you want to help others to do well, right? You want to go where you want to go. So if you're number one, you get to go where you want to go.

Amanda's internal conflict with helping people she was competing with for the ability to choose their subsequent assignments was a barrier to building relatedness. She concluded that her training did not prioritize fostering a sense of community.

During the focus group interview, relatedness remained the topic Amanda spoke about at length,

> I wish I had the experience that Alison had. My class was very competitive with each other, a little catty. The relationships that I built, some of them worked so great and unfortunately, those also came with me to the fleet. And so it just

> continued on with the competitive nature or the, I don't know, I guess not really seeing anybody as, seeing them as more of an equal, even though they're no longer working at the same level as you. So I wouldn't say that it was fostering any kind of positive relationships, at least for my class.

The inherent competition of the classroom environment also impeded Amanda from building positive relationships with those around her. When asked to expound on her viewpoint, she continued,

> I was like, no, I'm not. Maybe it's just that the Aegis FC community is a bit more competitive, and they don't really want to help out the others. They want to be seen as the best, not one of the best. And so the instructors weren't the best. They weren't the most helpful. And the class was equally as vicious.

Amanda expressed her biggest regret in her training was that she could not foster positive relationships. Amanda did not believe that relatedness was a factor in her training.

Summary of Amanda's perceptions. Amanda's perceptions of her training were resoundingly negative. Regarding the first research question, Amanda did not believe she was autonomous during her initial apprenticeship training. She felt she could only control her time investment and level of effort. She mainly complained about the pacing of the instruction. Related to the second research question, Amanda also did not subscribe to a level of competence gained from her training. Amanda's chief criticism was that the training only provided a surface level of understanding rather than expertise. Related to the third research question, Amanda lamented the level of competition inherent to her job, which precluded the development of a sense of community. Her biggest disappointment was that she could not foster positive relationships during training.

Embedded Unit of Analysis: Hudson

The second study participant's name was Hudson (pseudonym). At the time of the study, Hudson was a 33-year-old White male. He enlisted in the U.S. Navy at the rank of

E-1. He had served for nine years and was at the rank of E-6 at the time of the study. After completing boot camp, Hudson attended ATT. After ATT, Hudson progressed to ET A school. He then moved on to his C school for communications systems. Hudson's first assignment was to the USS Robert Smalls, classified as a cruiser. Hudson has since completed four other C schools during his service.

Hudson's perceptions of autonomy in his apprentice-level training. The first research question in this study was: How do U.S. Navy service members describe their autonomy in their initial apprenticeship training? I collected data from a questionnaire, an individual interview, and a focus group interview to answer this research question for Hudson.

In the questionnaire, Hudson's response about the autonomy level focused on his instructors' involvement. He shared,

> When I was going through A school, some instructors took more time to assist those who were not retaining the information as others or as provided through PowerPoints. But majority of the instructors were expecting the students to learn with the same methods.

Hudson focused on how his instructors supported him, so I followed up with additional questions in the interview.

Clarified during his interview, Hudson painted a bleak picture of autonomy during his training in responding, "Not really" when asked if he felt autonomous during his training. He specifically lamented the lack of personalization in training,

> So it teaches everybody everything they need to know about every type of gear that affects this spectrum of frequencies, or rather, this type of radar. So during those sections that these people need to like get extra time on this and other people shouldn't because it's still the same instructor time... I had to learn that on the ship more than I was in the class, but they showed you this is what it's going to look like. We weren't allowed to touch it, but that's where I see where the gap

> should be is that if like certain types of configurations need to be more focused on those individual students should be focused on them.

Hudson shared that rather than personalizing training for individuals, the instructors attempt to convey the bigger picture of the curriculum. This distinction led to what he perceived as a gap in training. When asked how to improve this, Hudson complained that training felt like a "check in the box" rather than an investment as he had to learn more on the ship than in the classroom.

During the focus group interview, Hudson's take on autonomy again focused on a perceived lack of personalization,

> I think it's just that they need to prioritize when people are actually going, they should know what's on every, well, I mean, most platforms so they can dedicate that time to those individual types of the comms gear or types of the versions of the radar gear because they spend so much time checking the boxes to make sure you have this version of the radio is taught and troubleshot. For me, I didn't see either of those on the ship. So I guess it needs, I don't think it costs probably more money to specialize in that or spend more time to do the way I'm saying it, but I think it'd be more beneficial in the long run.

When asked if an increased personal focus on a service member's career would be beneficial, Hudson responded, "I think it will help them, so when they get there, they're already know what they're looking into." Like Amanda, Hudson was not allowed to choose the job he would perform in the U.S. Navy. This lack of choice impacted the training he received.

Hudson's perceptions of competence in his apprentice-level training. The second research question in this study was: How do U.S. Navy service members describe the competence gained from their initial apprenticeship training? I collected data from a questionnaire, an individual interview, and a focus group interview to answer this research question for Hudson.

When asked about the expertise he gained from his training, Hudson shared, "Boot camp lessons and some A school lessons had a higher level of retention for me over others because I have found I learn better with physical learning over PowerPoint learning." The lack of tailoring to his learning style made it difficult for Hudson to gain the desired expertise.

During his interview, Hudson detailed the high stakes portrayed to him during his training,

> For me, going from boot camp and then straight into ATT, I felt like I was fish out of water for a lot of reasons because...circuit diagrams and like trying to follow where power goes, it was it was all new. And I felt because of the pressure of the military. They were basically saying if you didn't keep up, you were going to be left behind...It was not very, very in-depth either at the time. It taught me very quickly how to adapt and learn as I went.

Hudson expressed that he perceived the training as lacking in depth and excessively fast-paced. His instructors informed him that if he could not retain the information, he could be left behind, potentially lagging behind in subsequent classes.

When asked what hindered his development, Hudson shared his thoughts on the learning medium,

> A lot of reliability on PowerPoints. Which I get why because they want to be like consistent. And they want to make sure the information got there. Yes, some people have more specialty than others with this equipment. Some people are better at teaching but better at describing some information than other information. So I get why they just stuck to basic baseline, which was the slideshow. They gave everyone a lot of notes, but you took quizzes after those slideshows. But for me, I like doing more than sitting in front of a computer, so when we actually got to do the physical aspects of the troubleshooting and stuff, that's where I thrive.

Hudson's training included several PowerPoints rather than a focus on the physical aspects of the job as he would have preferred. I also asked Hudson if he felt the level of

expertise gained from his training was commiserate with the expectations of his duties, and he shook his head.

Hudson shared his thoughts if his training prepared him for his duties during the focus group interview, "If they did that for my rate, it'd be, it'd just turn off, turn it back on half the time. So, I mean that that's probably why they don't do that for me." His perception spoke to only a surface level of understanding rather than an attempt to convey expertise.

Hudson's perceptions of relatedness in his apprentice-level training. The third research question in this study was: How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training? I collected data from a questionnaire, an individual interview, and a focus group interview to answer this research question for Hudson.

Unlike Amanda, Hudson did feel a sense of community during his training. He shared in the questionnaire, "I feel that the sense of community was created because you had others going through the same struggles creating great and effective connections." Hudson spoke positively about a sense of relatedness fostered during his apprentice-level training.

As I interviewed Hudson, he would go into more detail about the sense of relatedness during his training,

> It was like help like the instructor was almost like, help me help you so we can get out of here kind of thing. So it made us all like, okay, let's figure this out fast and or help us understand this better. And together, if someone had like a hiccup, they usually paired us off.

The desire to complete their work to allow for time away from work remained a driving factor for the sense of community. Hudson also shared,

> There were times where we hung out for when the teacher would have to like doing the troubleshooting...It depends on your training command. It depends like they're very like, I was very honest when they asked me these questions too. Yeah. And made it more approachable, not like you're scared going there. So I think that helped in a way, especially for them.

The perceived authenticity of his instructors in preparing him for his duties at sea struck Hudson. He carried this mentorship with him throughout his career.

Hudson's perceptions of community centered on the mentors in his career during the focus group interview. He shared,

> I say that again, we had a couple of good mentors. Oddly enough, they were FCs that were teaching the ET class. But to this day, I will see people from my A school class out in the fleet, and we still, it's like we didn't even, it's like we left, we've been seeing each other every day like you pick right back up. So, I feel like the struggles of the death by PowerPoint, definitely like everyone was like mutually struggling with it, that we all like kind of helped each other or like encouraged each other. And I think it was a good bonding experience.

The bond between not only the students themselves but also the instructors was a bright spot for Hudson,

> I probably would have had more connections with like the instructors at the A school because they definitely had a lot of like in-depth knowledge. I wish I would have kept in contact with them and probably helped me with my career a little bit more.

Hudson shared regret about furthering the depth of the relatedness established during his training in that it would have helped in networking.

Summary of Hudson's perceptions. Hudson's perceptions of all three research questions were a mixture of different perspectives. Related to the first research question, initially confused about the definition of autonomy in training, Hudson responded negatively once clarified. He lamented the lack of personalization of an individual service member's learning style or career path. Regarding the second research question, Hudson complained that his training only provided a surface understanding. An over-reliance on

PowerPoint to convey the course material specifically hindered his development. However, regarding the third research question, Hudson spoke positively about the sense of community fostered during his training. He connected with his fellow service members undergoing training and spoke highly of his mentors to help him through the training.

Embedded Unit of Analysis: Evan

The third participant's name was Evan (pseudonym). At the time of the study, Evan was a 33-year-old Black male. He joined the U.S. Navy at the rank of E-1. Evan then attended the Naval Academy. He has served as an O-3 with eight years of experience at the time of the study. After completing the Naval Academy, he moved on to Defense Information school, which focused on communications. His next assignment was to RMC. At the time of the study, Evan served as a marketing communications lead.

Evan's perceptions of autonomy in his apprentice-level training. The first research question in this study was: How do U.S. Navy service members describe their autonomy in their initial apprenticeship training? To answer this research question for Evan, I collected data from a questionnaire, an individual interview, and a focus group interview.

When I asked about his level of autonomy during the questionnaire, Evan responded, "It wasn't as personalized as it could have been. All lessons were made as a shotgun format for all students to learn from regardless of their familiarization of the material." Evan's negative response when queried about autonomy focused on the lack of personalization for students.

In the interview, Evan shared more information about the lack of autonomy in his training. He did not believe autonomy was a focus for his training and shared,

> I don't think we have much autonomy. Because I mean, it's like during the basic school, it's a very, as I said, the beginning, they push through, they don't take breaks. I mean, even when there's bad weather, they're still they're still pushing through.

Evan explained that there were no days off during training and that every day for six months was planned. He perceived that the goal was to finish the training in the allotted time and reiterated, "No, I don't feel much autonomy." In expressing that he was not afforded with autonomy during his apprentice-level training, Evan shared that he found the pacing for his training problematic.

During the focus group interview, Evan reiterated the claims made by Amanda and Hudson in that he also could not pick his job, "I was trying to do human intelligence. It was my top choice. I had a wish list, but then because of availability, I was told, 'Hey, you're going to be a communication officer.' And then I went communications." This lack of autonomy was not limited to Evan's daily routine; he also experienced a lack of autonomy with his job choice.

Evan's perceptions of competence in his apprentice-level training. The second research question in this study was: How do U.S. Navy service members describe the competence gained from their initial apprenticeship training? To answer this research question for Evan, I collected data from a questionnaire, an individual interview, and a focus group interview.

Evan shared his perception of the competence gained from his training during the questionnaire, "I gained a surface-level understanding of servers, radio, and networks." Like some of the other participants, Evan pointed to only learning information at a surface level.

During his interview, Evan shared much more detail about his perceptions about competence,

> For comms school, it did help me in terms of understanding equipment capabilities. Having the foundation to understand like, 'Alright, how do I avoid this? Look at abilities that they have.' That's what we've learned in school. Truthfully, that course did not prepare me for what my current job is.

Although Evan shared that he did not receive adequate preparation in communications school, he went on to explain that at his recruiter management course, he gained a foundational understanding of recruiting processes. He shared, "So, it's good to understand what they're doing at their level, but I'm not operating at that level. I didn't have that much context, unless I was like, in their spaces and doing their daily job." Evan was very complimentary about building a foundational level of understanding. Evan declined when asked if he felt he gained competence during training.

Evan pivoted from a personal level of competence to the antiquated nature of the equipment he worked with, sharing,

> I work in a very technical military occupational specialty (MOS). I think even some of the servers that we were practicing on, they were like from like 2000, 2003, and like in the real world who's using outdated servers or outdated exchange servers?... So, in the fleet, I mean, I know like Navy Marine Corps Internet (NMCI) is pretty outdated. We were upgrading to like Windows 10, I think I can tell in 2015 and now we're on like Windows 11 or something, but what we were training on was 2003. And so, if I were to step out and try to take the skills I learned in my MOS school and go to a tech IT firm and be like, 'Hey, I'm familiar with this service system.' That's like two decades old.

Evan questioned why he was trained "on something so outdated." He further explained that he did not think he could transfer the skills that he learned because he was being taught on equipment or systems that were not current. Evan emphasized the use of outdated equipment. When I pressed further if he felt the military imparted a level of

competence beyond a surface level, Evan shook his head to indicate a negative perception.

Evan's perceptions of relatedness in his apprentice-level training. The third research question in this study was: How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training? To answer this research question for Evan, I collected data from a questionnaire, an individual interview, and a focus group interview.

Responding to the level of relatedness in his questionnaire, Evan explained, "I gained a significant sense of community with peers who were bound for the fleet post-training." Evan would later share that the bond forged among students was due to the shared nature of their experiences during training.

During his interview, Evan described his perception of relatedness with his peers, sharing,

> We had a code word, blueberry pancakes, for example. If we said that word, that meant that our captain was nearby, and that was like the signal to stop talking. Because it doesn't pick up on what we're saying...But things like that I think build camaraderie were like inside jokes. We had a barbecue outside in the hotel, and then RMC, I think we just it was a social hour, people sitting around talking about what they learned that day...We're still professional, but we're having candid conversations.

When asked to explain if the sense of community originated from the instructors, Evan answered, "Instructors? No, I think because I was so junior in rank, I think we just we didn't even want to. We kept our distance." Evan claimed the camaraderie built was solely among and by the students.

During the focus group interview, Evan's comments centered on the benefits of fostering relationships,

> I think those relationships you build early on will pay dividends later on of like, hey, I've got someone else at another unit that I can reach out to get asked for help. I think that your network, it sounds cliche, but your network of building those relationships early, because maybe later down the line, you might need to phone a friend or get out of some trouble and you guys can reflect back on, hey, we went to the training pipeline together, and now I'm just calling to get some help because I'm in a sticky situation.

Evan viewed his relatedness among his peers as beneficial in that he may need to reach out to them for support in future situations, but he seemed to mistrust the leaders appointed over him.

Summary of Evan's perceptions. Related to the first research question, when discussing autonomy, Evan declared that autonomy was not present in his career across all three data sources. He found he could not personalize his training or job choice, similar to the other study participants. Related to the second research question, Evan believed the U.S. Navy did not provide appropriate expertise for those who may transition from service. Like the other participants, Evan believed he only gained a surface level of understanding from his apprenticeship-level training. He complained about the outdated equipment he worked with, citing that the civilian sector has far outpaced the military. Related to the third research question, Evan found that he was able to establish a sense of community among his fellow students. Evan advocated for networking among professionals to strengthen one's problem-solving ability. Evan was careful to warn that his instructors did not inspire a sense of community; rather, this sense of community was fostered by students going through a shared experience.

Embedded Unit of Analysis: Alison

The fourth participant's name was Alison. At the time of the study, Alison was a 29-year-old White female. She joined the U.S. Navy at the rank of E-3. She had served

for six years and had attained the rank of E-6, which was her rank at the time of the study. After completing boot camp, Alison attended ATT. After ATT, Alison completed her FC A school. She then moved onto her C school for CIWS. Her first assignment was to the USS Lassen.

Alison's perceptions of autonomy in her apprentice-level training. The first research question in this study was: How do U.S. Navy service members describe their autonomy in their initial apprenticeship training? To answer this research question for Alison, I collected data from a questionnaire, an individual interview, and a focus group interview.

When asked to describe the level of autonomy allowed during her training, Alison shared,

> The hands-on training is pretty valuable for visual learners and allows people with different learning styles to understand the material. The learning process could be made better by recognizing individual weaknesses in the overall material. Extra concentration in those areas could make a stronger learning structure. When it came time to pick our specialty, we didn't have much knowledge on any of the options, and also, they didn't let some individuals pick.

Alison shared that she was not autonomous during her apprenticeship-level training.

During her interview, I asked her about autonomy, and Alison said, "I would say for what they have structured wise, you don't really have control over it unless like for me myself, I didn't get to choose CIWS." Alison explained how she could only control the effort she put into her training, sharing,

> I took my extra time, and [my instructor] took extra time to teach me those things. Kind of depending on your instructor and who you have, and if they help you out with things that you might not be very inclined on or have prior knowledge of. Pretty much everything else, like, you know, is you don't really get to choose.

Alison's training was also computer-based. I asked Alison if she felt she had any control in her training. Alison shared,

> No, even though it was computer-based, you still were given like, walk me through it. You were given like, okay, you're going to do one, two, three, four, five. And you couldn't sit there and say, well, I kind of have a little bit of background at three. Can I start at three and then work my way, you know, just to give you a hypothetical example. No.

After sharing her lack of autonomy in her training, I asked Alison if she could choose her job. Alison shared, "Even with like the NEC thing, my class didn't get to choose. Would I have chosen a NEC that was so mechanically intense? No." She explained, "So I didn't get to choose that for myself where I could have chosen better." Alison emphasized the lack of autonomy throughout her training experience.

During the focus group interview, I returned to the lack of control over her job choice. Alison explained, "We got assigned at boot camp like we're going to be FC or ET. They just showed up in our Navy Standard Integrated Personnel Systems (NSIPS) one day, we got CIWS." When asked if she believed she was afforded autonomy during her training, Alison shook her head.

Alison's perceptions of competence in her apprentice-level training. The second research question in this study was: How do U.S. Navy service members describe the competence gained from their initial apprenticeship training? To answer this research question for Alison, I collected data from a questionnaire, an individual interview, and a focus group interview.

I asked Alison to describe the competence she gained during her training on her questionnaire. Alison wrote, "From the training itself, I learned some field-related things. Training will give you a foundational level knowledge. The real knowledge is seeing and

learning hands-on, on the actual ship." Alison attributed her eventual competence not to her apprentice-level training but to practical training at her first assignment.

During her interview, Alison lamented about the atrophy of her competence development from her A and C school to her ship, sharing,

> It was the time between that training and for you to actually go onto the ship, you're already like learning so much more about your specific system that you kind of just, you know, you're putting that at the back of your mind and you might not remember all of it.

Alison explained that she disliked the time spent between training and arriving at her first command. She attributed this period to an atrophy in developing her competence. When I asked Alison how she would shore this weakness in her training, she shared,

> If they kept brushing up on it, kept making you like apply it and like your C school throughout the C school and stuff like that, it would better prepare you for going to the ship and getting tag out qualified or learning electrical safety or, you know, learning just basic things that you do need to get qualified before you can maintain or touch your gear.

Alison believed a refresher training between training and her first command to keep her skills fresh would have benefitted her competence.

Discussing how this atrophy of her competence affected her, Alison further shared that she had to relearn the content. She explained,

> Once you're in the schoolhouse, you're not really understanding what they're talking about. Like, they do a lab, but honestly you not really understanding until it's actually applied. So, if it was still applied during C school too, like then your kind of understanding where, how it relates to you working on your gear. So, just kind of following it throughout your training would better prepare you once you get to the boat.

Alison expressed a desire for better connections from training to actual hands-on application. Alison shook her head when asked if she believed her apprenticeship training provided the requisite competence for her duties.

At the focus group interview, I asked where the gap prevented her from gaining competence. Alison shared,

> I feel like a lot of knowledge was left up to us to learn in the fleet, and depending on where you go and who comes before you and who's over you and who's supposed to be teaching you, or who's supposed to be guiding you and that extra education, that they leave it up to them. You don't always get the best people to learn from, or that actually know how to do things the right way, or who actually have knowledge.

I asked how she would correct this deficiency, and Alison described, "If we had just kept through it, I would have understood it by the time I got to the ship. I wouldn't have to learn from people who were lackadaisical." Alison also had a specific recommendation for all of the focus group interview participants,

> If you ever read the book *Atomic Habits,* 1% matters. They compound on top of each other. It's changing one little thing like keeping up with tag out, like, that's one thing I don't have to learn or figure out when I get to the boat and have to rely on people above me to teach me because they're not knowledgeable all the time or care to do it the right way. So, I would just say that little things like that matter.

Alison believed compounding factors discouraging the gain of competence could be changed if the U.S. Navy followed the suggestions from *Atomic Habits*.

Alison's perceptions of relatedness in her apprentice-level training. The third research question in this study was: How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training? To answer this research question for Alison, I collected data from a questionnaire, an individual interview, and a focus group interview.

Alison described the sense of community she felt during her training on the questionnaire as such, "When you're going through training you develop a sense of pride in the rate you are chosen to be in. The more you learn about your gear, the more you

appreciate it." Alison portrayed relatedness as present during her training through the lens of a team-building tool.

Alison's depiction of relatedness during the interview focused on the relationships she built,

> We had like a strong class cause we really enjoyed each other...We would even do mandatory PT with each other. So, even outside of the classroom, we were doing fun things together. We would all hang out regardless. So, we built long-lasting relationships with each other.

During her apprentice-level training, Alison's bonding experiences with her classmates fostered a strong sense of relatedness as they spent time together outside the learning environment and engaging in fun activities.

Alison continued to describe how she and her classmates banded together during their training, sharing,

> We would encourage each other through whatever tests we had...Like, you just kind of know those from like ATT through A school and it transpired into C school, you kind of know who is going to get the higher grades, understanding the material a little bit better because they're the same people who have the higher grades in every single school, every class.

Alison shared that knowing her classmates allowed her to build relationships with them. Alison's bonds with her classmates extended beyond the classroom, as they also supported one another during their training.

I asked Alison what she believed the genesis of the relatedness she experienced, and she responded,

> We did operate as a team. We kind of had that family feel organically, I would say. And because we spent so much time with each other, and we made sure like no one would fail...And so we would encourage each other, you know it was just like a little family, like we all knew each other, what each other liked and, you know, so I would say we developed that organically.

Alison perceived that the relatedness during her training had developed organically. The class was committed to ensuring that all completed their training together.

Once the focus group interview began, I asked about the origins of Alison's relatedness. She shared, "I think we had a pretty good, like strong connection with our class. We took kind of pride in like being better than the other classes." Moving to what inspired this level of pride, Alison pointed to her instructors, explaining,

> Just because it's just, it gives you a better level of understanding. Like he was a great class mentor to us, so I was very grateful for that because he did care about our learning, and he would point out things that would, oh, you could see this in the fleet and stuff like that. So I did like that aspect of it.

Alison was the first participant to point to her instructors as a driving force to the relatedness experienced during her training.

Summary of Alison's perceptions. Related to the first research question, Alison did not feel in control of the progression of her training. She shared that she could only control the effort exhibited to complete her training. Regarding the second research question, Alison perceived a foundational level of competence gained from her training. She also described the delta between her training and the expectations placed on her once she reached her ship. This difference between these two competence levels made her perceive a lack of competence gained from her training. Regarding the third research question, Alison spoke highly of the relatedness fostered during her training. She credited her instructors with the genesis of this sense of community.

Embedded Unit of Analysis: Darren

The fifth participant's name was Darren (pseudonym). Darren was a 25-year-old male of mixed race at the time of the study. His ethnic background was White and Black.

Darren joined the U.S. Navy as an E-1. He served for six years and attained the rank of E-6, his rank at the time of the study. After completing boot camp, Darren attended ATT. After ATT, Darren completed his FC A school. He then moved on to his C school for CIWS. His first assignment was to the USS Farragut, a destroyer like the USS Fitzgerald and USS John S. McCain.

Darren's perceptions of autonomy in his apprentice-level training. The first research question in this study was: How do U.S. Navy service members describe their autonomy in their initial apprenticeship training? To answer this research question for Darren, I collected data from a questionnaire, an individual interview, and a focus group interview.

In discussing autonomy on his questionnaire, Darren believed the onus is on the individual, "I believe the personalization was heavily based on the individual's motivation to do so." Darren's stance that the level of autonomy resided within the individual bore further examination.

In discussing autonomy during his interview, Darren clarified his questionnaire comments, "I would say very little. There wasn't much opportunity to input any of my kind of learning capabilities into my schools." Pressed about catering to learning styles, Darren explained,

> I would say for like, if you are like a hands-on learner, if the school doesn't have the specific equipment that you're learning on, then you're kind of just lost in that situation because you can only go off the PowerPoints, the guides, the printouts.

Darren's perception of a lack of autonomy centered on a lack of customization to empower his learning style.

A critical discussion in the focus group interview centered on autonomy as related to job choice. Darren's experience mirrored that of his fellow participants. He shared, "Yeah, I wanted ET. And then once I was told that I was FC, I also wanted like Aegis, and then I got conventional." Darren shook his head when asked if he believed he could have personalized his learning experience.

Darren's perceptions of competence in his apprentice-level training. The second research question in this study was: How do U.S. Navy service members describe the competence gained from their initial apprenticeship training? To answer this research question for Darren, I collected data from a questionnaire, an individual interview, and a focus group interview.

When completing his questionnaire, Darren's perception of his competence was positive, "I gained a lot of knowledge and skill from both my A school and C school, that I continuously use in my career." Like his perceptions of autonomy during his training, Darren's perceptions of competence proved unique. His questionnaire responses prompted a thorough discussion during the interview.

When I asked during his interview if the level of competence gained in training prepared him for his duties, Darren answered,

> I would say excellently. My C school was for my NEC. So, it taught me everything I need to know about the system. They gave the basic fundamentals for you to build off on and to wherever you're going. So obviously they give you how the system works and how to fix some things, but obviously they can't tell you everything that's going to break. But based off those fundamentals, you should be able to figure out any situation that you occur out in the field.

As his comments seemed contradictory, I probed further to learn more about Darren's perceptions of how he could have been better prepared. He shared,

> I think maintenance in general could be more touched upon to help people prepare for what they're going to expect in the fleet. And like I said earlier, that's not always the case because people get to the ship, and they're just completely lost. And if there's no one that has the experience or knowledge to pass on, then there'll be lost for quite some time until they get a tech [representative] or they get outside influence and knowledge on that component.

Concluding the discussion about competence, I asked Darren if he believed the competence gained from his apprenticeship-level training was appropriate, and he shook his head.

While discussing competence in the focus group interview, Darren's comments focused on the difference between a classroom environment and his daily routine, "They weren't very hard from our perspective. They weren't, but there are other students who like really struggled. So I can see where like real faults, they're not as easy as the schoolhouse, obviously." Darren believed this lack of conformity to his daily duties placed him at a disadvantage once immersed on a ship.

Darren's perceptions of relatedness in his apprentice-level training. The third research question in this study was: How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training? To answer this research question for Darren, I collected data from a questionnaire, an individual interview, and a focus group interview.

When answering his questionnaire about relatedness, Darren's perceptions were seemingly positive again, "The community fostered was great and showed a glimpse of the rate community I was joining." Darren's positive views regarding the relatedness fostered during his training bore further exploration during the interviews.

In the interview, Darren shared more about his perceptions of relatedness, and his response focused on the group being a team. He shared,

> A lot of our tasks in general or we're group based, and that kind of foster the, we're all one team environment. And it's not just like from the class environment. It led on to like PT or like whenever we were doing sports, they always try to incorporate it, everyone working together.

Darren shared that relatedness fostered during his training extended beyond the classroom into their personal lives. When asked if the relatedness fostered was organic or forced, Darren explained,

> I would say organically for me personally because I was with the same group of people from ATT to A school to C school. It was the same group of people, and just being around a group of people over that extended amount of time, there's going to be camaraderie formed organically.

Organic relatedness fostered during his training was born from familiarity due to the time spent with one another.

During the focus group interview, Darren's thoughts surrounded his instructors. He explained,

> Our instructors, like in C school, I still maintain like a communication with him even when I got to the fleet, and it was still the same as if we were in school. He was just very helpful, and we maintained our like connection the entire time. So, I feel like overall, it was very good.

Darren's perceptions of relatedness remained positive when asked what he could have done differently during his training, "I feel like we could have fostered more connections. That's what I would change." Like Evan before him, Darren espoused the benefits of networking through the sense of community built during his training.

Summary of Darren's perceptions. Related to the first research question, he initially answered that he felt the individual was in charge of the level of autonomy during their training. During the interview, he shared that he did not believe his training experience allowed for autonomy. Regarding the second research question, Darren elaborated on a surface level of understanding gained from his training. He did not think

that the level of competence achieved was in line with the requirements of his duties. Regarding the third research question, Darren spoke glowingly about the relatedness during his training. The sense of community stemmed from his fellow students and the mentors he gained.

Within-Case Analysis

The study revealed three themes, which became the study's findings. First, service members did not feel autonomous during their apprenticeship-level training in the U.S. Navy, particularly in job choice, the pacing of learning, and assignment and location selection. Second, service members did not feel their training provided the requisite level of competence for their subsequent jobs. Third, the sense of community among service members is contingent upon their instructors and peers. Table 8 illustrates the themes present across each case.

Table 8

Study Themes

Theme	Amanda	Hudson	Evan	Alison	Darren
Service members did not feel autonomous during their apprenticeship-level training in the U.S. Navy particularly in job choice, the pacing of learning, and assignment and location selection.	X	X	X	X	X
Service members did not feel their training provided the requisite level of competence for their subsequent jobs.	X	X	X	X	X
The sense of community among service members is contingent upon their instructors and peers.		X	X	X	X

Themes Related to Research Question One and the Theoretical Framework

The first research question focused on how U.S. Navy service members described their autonomy in their initial apprenticeship training. This question allowed me to explore the autonomy aspect of Deci and Ryan's (1985) self-determination theory in the context of apprentice-level training in the U.S. Navy. The theme developed from this research question was that service members did not feel autonomous during their apprentice-level training in the U.S. Navy.

None of the participants believed they were autonomous during their apprenticeship-level training. All participants also mentioned that they were not autonomous in choosing their jobs in the U.S. Navy. Each participant received their rate or system specialty assignment without providing any input. Amanda and Alison specifically cited that they could only control their level of effort during their training. They both spoke about the extra effort required to maintain their progress during their training. Amanda, Hudson, Alison, and Darren were told they must remain on schedule with their training and could not fall behind. Hudson and Evan objected to the lack of personalization of service members' needs or learning styles. They believed the lack of personalization during their training negatively impacted their ability to be autonomous. Hudson complained that his training amounted to a "check in the box" vice an investment in his development. It was clear to me in the data analysis that participants consistently believed they lacked autonomy during their apprenticeship-level training, particularly in job choice, the pacing of learning, and assignment and location selection.

Themes Related to Research Question Two and the Theoretical Framework

The second research question focused on how U.S. Navy service members describe the competence gained from their initial apprenticeship training. This question allowed me to study the competence aspect of Deci and Ryan's (1985) self-determination theory in the context of apprentice-level training in the U.S. Navy. The theme developed from this research question was that service members did not feel their training provided the requisite competence level for their subsequent jobs.

All participants echoed a similar sentiment: Their training provided a surface level of understanding, and they did not receive expert-level training to prepare for their subsequent jobs. Amanda's chief complaint was the pace of instruction, which she did not believe allowed for long-term retention of the information. Hudson and Evan believed the U.S. Navy was too dependent on PowerPoint usage rather than catering to individual learning styles to benefit students' grasp of the material. Evan's example of training on computer networks running antiquated operating systems hampering his marketability after his military career highlights the plight of obtaining competence. Alison lamented the gap between apprenticeship-level training and reporting to her duty station, where she could apply her training as a detractor from competence. This gap caused her knowledge to atrophy before she could effectively apply her knowledge and skills. Darren believed the depth of the material presented was insufficient compared to his daily duties. This lack of conformity negatively impacted his ability to gain competence. None of the participants believed that they acquired competence from their apprenticeship-level training.

Themes Related to Research Question Three and the Theoretical Framework

The third research question focused on how U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training. This question allowed me to explore the relatedness aspect of Deci and Ryan's (1985) self-determination theory. The theme developed from the researched question was that the sense of community among service members is contingent upon their leaders.

The participants had divided opinions regarding the relatedness aspect of their training. Amanda did not feel a sense of community fostered during her training, while Hudson, Darren, Evan, and Alison did. Amanda pointed to the level of competition in her community as a detractor from relatedness. It was difficult for her to foster positive relationships when she felt she competed with those around her.

Hudson, Darren, Evan, and Alison spoke highly of their sense of community. Evan believed the relatedness formed organically through a "shared trauma" experience with his fellow students. Hudson, Darren, and Alison claimed their instructors and mentors deserved credit for fostering a sense of community among them. Hudson specifically cited his instructors as a driving force during his training and career, as he has maintained contact with these mentors. However, Amanda called out her instructors as an impediment to building a sense of relatedness. Alison and Darren credited the synergy formed among students who spent copious amounts of time together during their training. Among the participants, the theme of relatedness emerged as the most divisive.

Discussion

I uncovered three themes that led to three key findings for this study. First, service members did not feel autonomous during their apprenticeship-level training in the U.S.

Navy particularly in job choice, the pacing of learning, and assignment and location selection. Second, service members did not feel the training they received provided the requisite level of competence for their subsequent jobs. Third, the sense of community among service members is contingent upon their instructors and peers. In this section, I discuss these findings and compare and contrast them to the literature.

Service members' lack of autonomy. The first theme was that service members did not feel autonomous during their apprenticeship-level training in the U.S. Navy particularly in job choice, the pacing of learning, and assignment and location selection. Deci and Ryan (1985) explained that autonomy is a learner's need to feel in control of their learning experience. All participants in this study expressed that they did not feel in control of their learning experiences in their training. They all believed this lack of autonomy negatively affected their apprenticeship training experience.

Adult learners desire autonomy in their training (Deci & Ryan, 1985; Erlam et al., 2018; Sogunro, 2014; Tough, 1971). Tough (1971) is the formative work on the need for educational autonomy. Sogunro (2014) singled out autonomy as a catalyst for learning. Erlam et al. (2018) advocated autonomy in advancing nurses' knowledge base during their undergraduate phase. In this study, I found that none of the participants felt autonomous during their apprenticeship-level training. The participants felt this lack of autonomy hindered their development during their apprentice-level training. The study's findings confirm the works of Deci and Ryan (1985), Erlam et al. (2018), Sogunro (2014), and Tough (1971).

Training did not provide the requisite level of competence for subsequent jobs. The second theme was that service members did not feel their training provided the requisite competence level for their subsequent jobs. Deci and Ryan (1985) described competence as how a learner gains mastery of new skills and knowledge. None of the participants perceived they gained competence from their apprenticeship-level training. The application of new skills or knowledge gained is vital to enhancing competence. All participants expressed only a surface level of understanding imparted from their apprenticeship-level training.

It is critical to gain competence during training (Booth-Kewley & McWhorter, 2014; Dishon-Berkovits, 2014; Hussain et al., 2012; Sellberg, 2018). Dishon-Berkovits (2014) explored the relationship between goal-setting theory and achievement goal theory and showcased how educators who present challenging goals facilitate their students' progress. Hussain et al. (2012), Booth-Kewley and McWhorter (2014), and Sellberg (2018) all advocated for the use of simulators in training to enhance the application of skills gained. Hussain et al. (2012) explored training games' influence in enhancing training for the U.S. Navy. Booth-Kewley and McWhorter (2014) advocated simulator usage during corpsmen's training. Sellberg (2108) promoted the positive effects of simulators on two maritime training focus groups. In this study, I found that no participants highlighted training game usage during their apprentice-level training. Training games would have likely enhanced their experience. None of the participants in this study had experience with simulators during their training. This technological lapse in their training perhaps hindered their acquisition of competence.

My findings challenge the conclusions of Dishon-Berkovits (2014) while confirming the latter three studies. To facilitate their learning, four participants received challenging goals. They instead found these goals distracting in their quest for competence. In this study, however, I found that outdated equipment impeded attaining competence. An over-reliance on PowerPoint was also a distractor during training. The participants in this study all yearned for a hands-on approach to their training. Simulators could have achieved this pursuit.

Sense of community is contingent on instructors and peers. The third theme was that the sense of community among service members is contingent upon their leaders. Deci and Ryan (1985) defined relatedness as the learners' need to feel a sense of community during their development. Four of the five participants felt they gained a sense of community during their apprenticeship-level training.

Fostering a sense of relatedness enhances the learning experience (Kaplan et al., 2012; Sogunro, 2014; Wlodkowski, 2008). Wlodkowski (2008) highlighted the need for an inclusive learning environment for learners to thrive. Wlodkowski (2008) conducted a study with adult learners and found that the learning environment exhibiting a culturally responsive approach enhances the learning experience. This study was directly in line with Deci and Ryan's definition of relatedness. Kaplan et al. (2012) complemented Deci and Ryan in that learners will influence one another during their growth. This connectivity among students is crucial to their development. Kaplan et al. (2012) offered how to best apply Deci and Ryan's (1985) theories by exploring the assumptions surrounding motivational theories. Sogunro (2014) emphasized the importance of

interactive classrooms and effective management practices. Sogunro (2014) explained that instructors should infuse group activities into the curriculum to stimulate this need.

The findings of this study align with the conclusions of Wlodkowski (2008), Kaplan et al. (2012), and Sogunro (2014). The participants who shared that they experienced relatedness during their training pointed to that relatedness as a driving force for their progress, as Wlodkowski (2008) noted. Two participants echoed Kaplan et al.'s (2012) conclusions about how their classmates influenced them during training. The leaders who effectively managed their students achieved a sense of relatedness, as Sogunro (2014) described.

Implications and Recommendations

This single case study explored five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory. I collected data from five participants across three sources, which included questionnaires, individual interviews, and a focus group interview. Implications from this study affect three stakeholders: new U.S. Navy accessions, U.S. Navy apprentice training instructors, and senior U.S. Navy decision-makers. I discuss how these implications affect these groups. Subsequently, I present recommendations for future research.

New U.S. Navy Accessions

The first group of stakeholders is new U.S. Navy accessions. Men and women newly entering service are new accession service members. New accessions to the U.S. Navy enter service without knowing what they require to succeed in their careers. This study shows new possibilities of what to expect in their careers. New accessions could

benefit from knowing this study's findings, as it could inform their approach to achieve a solid foundation for their careers. For example, several study participants attributed the positive relationships fostered with instructors and peers as guiding factors in their careers. By building relationships with their peers or instructors, new accessions position themselves for successful careers. This study enables new accessions to advocate for themselves. An informed accession can proactively positively shape their careers. Future studies could explore the progression of the effective nurturing of new accessions.

U.S. Navy Apprentice Training Instructors

The second group of stakeholders is U.S. Navy apprentice training instructors. All of the study's participants highlighted the importance of instructors in either a positive or negative manner. The assignment of an instructor billet occurs as with any other job choice. Assigned instructors may not have desired the appointment. Regardless of their assignment, it is imperative to treat the task of shaping future generations of leaders in the U.S. Navy with utmost seriousness. In this study, one participant's instructors left her with a negative impression of her community within the Navy. This poor beginning contributed to her negative outlook on service. However, three other participants attributed the influence of exceptional leaders to their careers. The difference in these participants' experiences highlights the criticality of U.S. Navy instructor duty.

U.S. Navy apprentice training instructors must heed the findings of this study as they function in their roles. Remaining focused on the service members they lead, these instructors train their reliefs. Instructors must positively present the U.S. Navy to foster a positive experience for junior service members. The correlation between attitudes among instructors and their students bears future research.

Senior U.S. Navy Decision Makers

The third group of stakeholders is senior U.S. Navy decision-makers. The significance of this study to senior decision-makers in the U.S. Navy is undeniable. Senior personnel often remain detached from the consequences of their decisions. This study brings the consequences of their decisions to the forefront of the conversation. Senior U.S. Navy decision-makers should consider this study's findings when deciding on apprenticeship-level training. For example, McNab and Angelis (2014) showcased how changing the instruction format cost the U.S. Navy vice the anticipated savings. Better decisions can improve the training for subsequent generations of service members.

Recommendations for Future Research

Research could consider this study's findings to design and conduct future studies focused on apprentice-level training in the U.S. Navy and other communities within the armed forces. Four of the five participants in this study shared similar experiences related to their training. Given that all participants in this study had prior work experience before working in the U.S. Navy, future studies focused on new recruits with no prior work experience is an area of focus for future researchers. Future studies focused on broader sects will also offer a broader composition of apprentice training in the U.S. Navy. Studies exploring different sects of service members will provide additional information as well. With more information, senior U.S. Navy decision-makers can improve future apprentice-level training.

Conclusion

This single case study explored five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's

(1985) self-determination theory. I collected data from five participants and uncovered three themes from the data, which became the study findings. First, service members do not believe they are autonomous during their apprenticeship-level training. Second, service members do not believe their apprenticeship-level training provided them with the requisite level of competence for their subsequent jobs. Third, the sense of community among service members is contingent upon their instructors and peers. The findings of this study have implications for three stakeholders: new U.S. Navy accessions, U.S. Navy apprentice training instructors, and senior U.S. Navy decision-makers. In Chapter Four, I offer an executive summary and my distribution plan for the study findings.

CHAPTER FOUR

Executive Summary and Distribution of Findings

Executive Summary

The collisions of the USS Fitzgerald and USS John S. McCain resulted in the deaths of 17 service members, spurring investigations by the NTSB. The NTSB (2019, 2020) pointed to insufficient training as one of the causal factors. The impact of these two tragedies extended beyond 17 traumatized families. Several upper-echelon officers lost their positions as a result of the collisions. All tasking to ships and airplanes in the interests of American security ceased for more than a week. Guiterman (2015) analyzed the construct of naval apprenticeship training, finding their current model unsustainable. In analyzing naval training requirements, Fletcher (2018) concluded that the allotment of training for service members does not currently meet the requirements of their demands. As such, I designed this study to learn more about training for U.S. Navy service members.

The purpose of this single case study was to explore five active-duty service members' perceptions of their apprentice-level training through the lens of Deci and Ryan's (1985) self-determination theory. Three research questions guided the study:

1. How do U.S. Navy service members describe their autonomy in their initial apprenticeship training?
2. How do U.S. Navy service members describe the competence gained from their initial apprenticeship training?

3. How do U.S. Navy service members describe the relatedness fostered during their initial apprenticeship training?

Overview of Data Collection and Analysis Procedures

I framed my study using Deci and Ryan's (1985) self-determination theory. Deci and Ryan (2012) defined self-determination theory as "an empirically derived theory of human motivation and personality in social contexts that differentiates motivation in terms of being autonomous and controlled" (p. 416). Self-determination theory comprises three aspects for motivation and growth: autonomy, competence, and relatedness (Ryan & Deci, 2000).

Data collection occurred in three phases. First, I used a questionnaire to solicit potential participants while collecting demographic information and their perceptions of their training. Posted daily over two weeks, I disseminated my questionnaire via the social media platforms Facebook and LinkedIn to identify potential participants by gathering their demographic information and some information about their training experiences. From 43 potential participants, I selected five individuals to participate in this study. Second, I conducted semi-structured individual interviews via Zoom. A semi-structured interview with each participant allowed me to dialogue with each participant (Galletta, 2013). The interviews lasted 30 to 45 minutes each in length. Third, I convened a focus group interview. The focus group interview included all five participants.

Data analysis for this study required five steps. In the first step, I managed and organized data. In the second step, I focused on reading and memoing emergent ideas. In the third step, I described and classified codes in themes. In the fourth step, I developed and assessed interpretations during a within-case analysis. Finally, I represented and visualized the data.

Summary of Key Findings

This study had three findings. First, service members did not feel autonomous during their apprenticeship-level training in the U.S. Navy particularly in job choice, the pacing of learning, and assignment and location selection. None of the participants believed they were autonomous during their apprenticeship-level training. In the data analysis, it was clear that participants consistently believed they lacked autonomy during their apprenticeship-level training, particularly in job choice, the pacing of learning, and assignment and location selection.

Second, service members did not feel the training they received provided the requisite level of competence for their subsequent jobs. All participants echoed a similar sentiment: Their training provided a surface level of understanding, and they did not receive expert-level training to prepare for the following jobs. None of the participants believed that they acquired competence from their apprenticeship-level training.

Third, the sense of community among service members is contingent upon their instructors and peers. Three of the five participants indicated their instructors and mentors deserved credit for fostering a sense of community among them. One participant, however, explained that her instructors were an impediment to building a sense of relatedness.

Implications and Recommendations

Implications from this study impact three stakeholders. The first group of stakeholders is new U.S. Navy accessions. This study shows new possibilities of what to expect in their careers. Hudson, Evan, Alison, and Darren attributed the positive relationships fostered with instructors and peers as guiding factors in their careers. By

building relationships with their peers or instructors, new accessions position themselves for successful careers. This study enables new accessions to advocate for themselves. Future studies on the progression of new accession service members and their external influences will offer a roadmap for effectively shaping the nurturing of new accessions.

The second group of stakeholders is U.S. Navy apprentice training instructors. U.S. Navy apprentice training instructors must heed the findings of this study as they function in their roles. Remaining focused on the service members they lead, these instructors train their reliefs. Instructors must positively present the U.S. Navy to foster a positive experience for junior service members. The correlation between attitudes among instructors and their students bears future research.

The third group of stakeholders is senior U.S. Navy decision-makers. Senior personnel often remain detached from the consequences of their decisions. This study brings the consequences of their decisions to the forefront of the conversation. Additionally, future studies focused on new recruits with no prior work experience is an area of possible focus for future researchers. Further, future studies focused on broader sects will offer a broader composition of apprentice training in the U.S. Navy. Studies exploring different sects of service members will provide additional information as well.

Findings Distribution Proposal

The improvement of the armed services is paramount for every American. Wenger-Trayner and Wenger-Trayner (2014) advocated for knowledgeability in a professional landscape. To enhance the knowledge of the landscape of the U.S. Navy, I offer the best methods to distribute my findings.

Target Audience

The target audience aligns with the same groups of stakeholders affected by my study: new U.S. Navy accessions, U.S. Navy apprentice training instructors, and senior U.S. Navy decision-makers. These stakeholder groups differ in the positioning of their careers. New U.S. Navy accessions are at the beginning of their careers. U.S. Navy apprentice training instructors are in the midst of their careers. Senior U.S. Navy decision-makers are near the conclusion of their careers. Each group of stakeholders would benefit from knowing the findings of this study.

Proposed Distribution Method and Venue

Reaching new U.S. Navy accessions, U.S. Navy apprentice training instructors, and senior U.S. Navy decision-makers will require careful consideration. The best approach to reaching each target audience is through professional presentation. Offering this study during new accessions' apprenticeship-level training will underscore the importance of this formative period. Basic training offers a captive audience for the proliferation of this study. Incorporating this study prior to U.S. Navy apprentice training instructors' training will convey the importance of their assignment. Adding the perspective of the assignments they are filling will aid in the assumption of their duties. Senior U.S. Navy decision-makers also training prior to reaching their assignment. Approaching senior leaders will require a measured approach. Integrating this study into that pipeline would benefit their perspective prior to making decisions.

Conclusion

The collisions of the USS Fitzgerald and USS John S. McCain resulted in the deaths of 17 service members. The NTSB (2019, 2020) pointed to insufficient training as

one of the causal factors. This single qualitative case study captured five active-duty U.S. Navy service members' perceptions of their apprenticeship-level training through the lens of Deci and Ryan's (1985) self-determination theory. I collected data from five participants across three sources (questionnaires, individual interviews, and a focus group interview). I uncovered three themes, which became the study findings from the data. First, service members do not believe they are autonomous during their apprenticeship-level training particularly in job choice, the pacing of learning, and assignment and location selection. Second, service members do not believe their apprenticeship-level training provided them with the requisite level of competence for their subsequent jobs. Third, the sense of community among service members is contingent upon their instructors and peers. Implications from this study affect three stakeholders, who are also the target audience: new U.S. Navy accessions, U.S. Navy apprentice training instructors, and senior U.S. Navy decision-makers.

APPENDICES

APPENDIX A

Participant Solicitation

Hello everyone!

I'm currently working to earn my doctorate at Baylor University. My research was inspired by the Fitz and McCain tragedies that occurred during the summer of 2017. I am seeking participants for my research, which focuses on exploring U.S. Navy active-duty service members' perceptions of their apprenticeship-level training.

Participation in my study would require filling out the survey at this link: [redacted]

If selected to participate in my research, only two steps are required: an interview and participation in a focus group.

If you're still reading, please share so I can reach out as far as possible.

Thank you!

APPENDIX B

Questionnaire Items

1. Please enter your name:

2. Please enter your contact email:

3. Please enter your contact telephone number:

4. Gender:

☐ Male
☐ Female
☐ Non-binary/third gender
☐ Prefer not to say

5. What year were you born?

6. Please select your ethnicity (more than one choice is allowed):

☐ White
☐ Black or African American
☐ Hispanic/Latinx
☐ Asian
☐ Other (Please enter)

7. How many years of service do you currently have:

☐ I have not completed my apprenticeship-level training yet.
☐ 0–4
☐ 4–8
☐ 8–12
☐ 12+

8. What rank did you enter the military as:

☐ E-1
☐ E-2
☐ E-3
☐ E-4
☐ E-5
☐ O-1
☐ O-2
☐ O-3

9. What is your current rank:

☐ E-1
☐ E-2
☐ E-3
☐ E-4
☐ E-5
☐ E-6
☐ E-7
☐ E-8
☐ E-9
☐ O-1
☐ O-2
☐ O-3
☐ O-4

For the following questions, please think back to your apprenticeship training upon entering the military. This could include basic training, "A" or "C" school, or any other training you received within your first six years of service:

10. In a few sentences, how would you describe your apprenticeship-level training experience?

11. In a few sentences, how would you describe the autonomy (personalization of the learning process) you experienced during your training?

12. In a few sentences, how would you describe the competence (expertise in knowledge or skills gained) gained from your training?

13. In a few sentences, how would you describe the relatedness (sense of community) fostered during your training?

APPENDIX C

Individual Interview Questions

1. Describe your apprenticeship training experience.
    a. What were the positive aspects of your training?
    b. What were the negative aspects of your training?
2. How did your training prepare you for your duties at sea?
3. How much of the training was left to a later date?
4. To what degree did you control your learning experience?
5. Where would you have liked more time in your training if given the choice?
6. How did your instructors inspire comradery with your fellow trainees?
7. How did your fellow trainees build a sense of community?
8. Is there anything that I did not discuss that you would like to?

APPENDIX D

Focus Group Interview Questions

1. How did naval training encourage growth or development?
2. If you could improve one facet of your training, what would it be?
3. In what ways were you given the leeway to personalize your training?
4. Were you encouraged to foster relationships during your training?
5. What would you do differently if you were to restart your training?
6. Is there anything else anyone would like to discuss that I have not yet covered?

APPENDIX E

Consent Form

Baylor University
Department of Curriculum and Instruction
Consent Form for Research

PROTOCOL TITLE:	A Single Case Study Exploring Service Members' Perceptions of Naval Training
PRINCIPAL INVESTIGATOR:	Stephen Perez
SUPPORTED BY:	Ryann Shelton, Ph.D.

Purpose of the research: This single case study explores five U.S. Navy active-duty service members' perceptions of their apprenticeship-level training. We ask you to participate in this study because as an active-duty service member, your contributions to the study's research will be invaluable.

Study activities: If you choose to be in the study, you will participate in a questionnaire, an individual interview, and a focus group interview. The principal investigator will lead both the interview and the focus group interview. Both activities will be focused on the participant's experiences in their naval training. Both activities will be recorded via Zoom.

Risks and Benefits:

- You may feel emotional or upset when answering some of the questions. Tell the interviewer anytime if you want to take a break or stop the interview.
- The researchers will ask you and the other group members to use only pseudonyms during the session. They will also ask you not to tell anyone outside the group what any particular person said in the group. However, the researchers cannot guarantee that everyone will keep the discussions private.
- Others may benefit in the future from the information that is learned in this study.

Confidentiality: A risk of participating in this study is the possibility of losing confidentiality. Loss of confidentiality includes sharing your personal information with someone not on the study team and was not supposed to see or know about your information. The researcher plans to protect your confidentiality.

We will keep the records of this study confidential by using pseudonyms vice actual names**.** We will also keep all records in password-protected folders to prevent unauthorized access. We will make every effort to keep your records confidential. However, there are times when federal or state law requires the disclosure of your records.

The authorized staff of Baylor University may review the study records for purposes such as quality control or safety.

Questions or concerns about this research study
You can contact us with any concerns or questions about the research. Our contact information is listed below:

Stephen Perez: [Redacted]
Ryann Shelton: [Redacted]

If you have questions about your rights as a research participant or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), you may contact the Baylor University IRB through the Office of the Vice Provost for Research at 254-710-3708 or irb@baylor.edu.

Taking part in this study is your choice. You are free not to take part or stop anytime for any reason. No matter what you decide, there will be no penalty or loss of benefit to which you are entitled. If you decide to withdraw from this study, the information that you have already provided will be kept confidential. Information already collected about you cannot be deleted.

You consent by continuing the research and completing the study activities.

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