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Educational Leadership, Collaboration, and Relevance: A Get Real, Get Better Approach to Innovating Major Weapon Systems Cost Analysis, Price Analysis, and Contract Negotiations in Higher Education

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Abstract

Against the backdrop of the need to accelerate advantage through decision making and process improvements, this auto-phenomenological study explored an educational leader's implementation of the U.S. Navy's Get Real, Get Better (GRGB) methodology to innovate major weapon systems cost analysis, price analysis, and contract negotiations courses, and the extent to which this action improved student learning outcomes at the Naval Postgraduate School in Monterey, California. The contribution of this paper lies in the adaptation and application of the U.S. Navy's GRGB methodology in assessing and implementing viable solutions to modernize MN3320/MN3321Cost Analysis, Price Analysis, and Contract Negotiations Courses. The findings support educational leadership, collaboration, and relevance are essential components that underpin the GRGB methodology for continuous improvement.

Introduction

Leadership and collaboration are crucial for success in today's complicated and fast evolving national security environment. Nowhere is this more apparent than in the Defense Acquisition System (DAS), where, on the one hand, the key weapon systems acquisition execution domain leaders are continuously responding to acquisition cost, schedule, and performance management challenges and personnel turnover. On the other hand, leaders in the education domain must continually innovate to stay current. Traditional approaches to educational leadership, collaboration, and relevance in this regard, have, in part, led to a limited focus on technological advancements, evolving stakeholder expectations, and the need for real-world application (Halabieh et al., 2022, p. 15).

These technological advancements in a cost/price analysis and contract negotiations environment higher education context, include proposal development analysis software used by most major defense contractors—ProPricer Contractor Edition (CE). This overlooked area also includes a limited awareness of the complementary proposal analysis software—ProPricer Government Edition (GE)—used by some DoD agencies within the major weapon systems execution domain; for example, Naval Strategic Systems Program Office and the F-35 Joint Strike Fighter Program Office (Cooper, 2022, p.i). In response, the U.S. Naval Postgraduate School's Contract Management Area implemented activities aligned with the Chief of Naval Operation's Get Real Get Better (GRGB) concepts and methodology to innovate major weapon systems cost/price analysis and contract negotiations courses. Honest assessments, learning from mistakes and fostering a culture

of continuous improvement are hallmarks of the GRGB leadership philosophy (Gilday, 2022; Lescher, 2021). While several successful GRGB process implementations such as the Naval Facilities Engineering Command (Korka, 2022) exist across the Naval Enterprise, this is the first application of the GRGB methodology in a DoD higher education context.

Purpose

This study examined the lived experience of an educational leader's implementation of the U.S. Navy's GRGB methodology, and the extent to which these activities shaped the quality of education, and improved student learning outcomes in the Naval Postgraduate School's Cost Analysis, Price Analysis, and Contract Negotiations courses in Monterey California, from the winter quarter 2021 to the summer quarter of 2022. Ultimately, the alignment of higher education activities with the realities of the mission area affects major weapon systems acquisition program outcomes.

Literature Review

Before discussing educational leadership, collaboration, and relevance in higher education, it is important to first define the GRGB methodology and underlying theories, namely, Von Bertalanffy's (1972) General Systems Theory (GST), which seeks to explain how system parts interact with the whole, and Schein's (2017) theory on culture, which emphasizes how fundamental assumptions, values, and norms, convey meaning and shapes individual behavior. Equally important is the need to provide background on the major weapon systems cost analysis, price analysis, and contract negotiations execution and higher education domain challenges.

GRGB Methodology

The U.S. Navy's GRGB methodology is a Navy-proven leadership and problem-solving philosophy focused on enabling a culture of continuous improvement through rigorous self-assessments and root-cause analysis at organizational levels (Gilday, 2022; Lescher, 2021). The Get Real (GR) element emphasizes interrogating personal beliefs and assumptions based on data, facts, and diverse input. The Get Better (GB) of element of GRGB encourages leaders to self-correct based on the GR results through accountability and collaboration (Lescher, 2022). When combined, these elements require organizational leaders to build trust, be courageous, and experiment to find the best solution by using a learning mindset (Lescher, 2022).

Implicit in the requirement for leaders to possess a learning mindset in the GRGB approach is the need to understand system-level organizational complexities and associated cultural elements. For example, the organizational and cultural differences between the higher education domain and the execution domain. Von Bertallanfy (1972) described this phenomenon of organizations through a GST, defining it as a set of elements, hierarchically structured into interactive systems (p. 417). GST explains the internal and external exchanges between the system (or organizations) and the environment across several unifying concepts (a) systems philosophy, (b) systems science, and (c) systems technology (Von Bertallanfy, 1972, p. 414, pp. 412–423). Systems philosophy refers to how leaders define the system, or "nature of the beast" (p. 421). Thus, without a definitional consensus on the system, observers in the cost analysis/price analysis, and contract negotiations execution and education domains may view the system as real, inferred from observation, or as conceptual, with differing perspectives on reality (Von Bertallanfy, 1972, p. 422). However, with a definitional consensus on the system, leaders in both domains can understand how one area of the system interacts and affects other areas of the system.

These interacting elements establish the systems science as aspect of GST, supporting the scientific exploration of the system as a whole (Von Bertallanfy, 1972, p. 415). The final element of GST involves system technology and refers to the growing technological demands of the system—both hardware and software—in response to increasing system complexities (Von Bertallanfy, 1972, p. 420). Coupled with the GRGB approach, GST requires leaders in the education domain to consider the implications on the execution domain, and for both leaders to consider the collective implications on the DAS, as a whole.

A related system-level consideration for leaders using the GRGB approach in this context, is organizational culture. According to Schein (2017) culture refers to cumulative organizational learning of beliefs and norms through which members perceive and behave (p. 5). From a similar organizational theory perspective, Hatch (2013) noted that organization consists of culture, social structure, technology, and physical structure (p. 16). Culture also includes adopted beliefs and values. Schein (2017) also emphasized that all group learning stems from someone's original beliefs and values, establishing the foundation for "the sense of what ought to be" (p. 18). This foundation of what ought to be could vary widely in both domains, depending on organizational performance imperatives (Zaccaro & Kilimoski, 2001, p. 11), or corresponding mission pressures. Shared group experiences, on the other hand, establish this sense of what ought to be through social validation, that is, groups learn behaviors and beliefs through the interactions with founders (Schein, 2017, p. 20). Over time, these values and beliefs become a shared philosophy in dealing with risks and uncertainty (Schein, 2017, p. 20). While the relationship between both domains contributes to the DAS risks and uncertainties as a whole positively, or negatively, Senge (2006) argued that most organizations do a poor job of understanding systemic problems (p. 315).

Execution Domain Cost/Price Analysis and Contract Negotiations Challenges

For more than three decades, the DoD has continued experience systemic challenges in the weapon systems acquisition execution domain (GAO, 2021). The historical works of the GAO, RAND, and those of others, revealed three interrelated challenges—people, products, and process—to major weapon systems cost analysis, price analysis, and contract negotiations. In the first challenge area, the acquisition workforce (people), a 2019 RAND Assessment of Gaps in Business Acumen of Knowledge of Industry within the Defense Acquisition Workforce concluded that knowledge gaps within the acquisition workforce exist in the areas of business acumen, industry operations and, industry motivations to an indeterminant extent (Weber et al., 2019, p. 112). Further, and from a process standpoint, these knowledge gaps impact the workforce's ability to develop requirements, conduct cost/price analysis, and negotiations (p. 112). Similarly, the GAO's 2019 Weapon Systems Assessment of the DoD's $1.9 trillion portfolio of major weapon systems programs concluded that inconsistent application of knowledge-based acquisition practices cascades risks over the entire acquisition cycle (p. 2), primarily supported by non-competitive cost/price analysis and contract negotiation activities (process) to deliver the major weapon system (product). Recommendations to improve these challenge areas focus on implementing knowledge-based practices, clarifying business acumen needs and industry-related knowledge, a focus on back to basics, and the need for government-industry co-education (GAO, 2021; OUSD[A&S], 2020, p.1; Weber et al., 2019, pp. 199–120). Although these recommendations for what to do exist, leaders in the execution domain must consider how to implement these recommendations in the context of dynamic organizational leadership performance imperatives—cognitive, social, personal, political, technological, financial and staffing (Zaccaro & Klimoski, 2002, p. 11)—the realities of mission area.

Education Domain Cost/Price Analysis and Contract Negotiations Challenges

Similar people, product, and process challenges areas also exist in the higher education domain. From a people perspective, a broad range active-duty military from all service component and DoD civilians attend in resident and distance learning cost/price analysis and contract negotiation courses. McCabe et al. (2020), compared the acquisition career development paths of Navy, Marine Corps, and Army acquisition officers (program management and contracting) and found that each service has different entry points in the acquisition career field (p. 90). DoD civilians attend these courses within the education domain at different career points with between five and 10 years of acquisition experience (p. 138). Contained in the idea of students with different entry points into the career field and higher education is the notion of a diverse group of learning styles. Kolb (2015) defined student learning types as divergers, assimilators, convergers, and accommodators. Divergers process information reflectively, perceive information concretely, and learn by feeling and watching. Assimilators process reflectively and perceive information abstractly. Convergers process information through active experimentation and perceive reality through abstract conceptualization. Accommodators process through active experimentation and perceive information through concrete experience (p.114). Educational domain leaders, then, must consider the challenges associated with a broad range of active-duty military and DoD civilians with various, career field experiences, as well diverse learning styles.

Product and process challenges also exist in the education domain. Products challenges center on curriculum and content design challenges, and process challenges include the active learning of the acquisition and contracting process of the execution domain. Halebiah et al. (2022) identified several problems facing institutions of higher learning: weak utilization of technology, limited pedagogical improvements, outmoded teaching methods and content, and lack of training and career-relevant skills. These researchers in educational leadership also call for contemporary researchers to investigate ways to best educate and train students to work cooperatively, to develop tolerance for differing viewpoints, and engage in civil discourse that is productive and not polarizing (Halabieh et al, 2022, p. 13).

Educational Leadership, Collaboration, and Relevance

Educational leadership involves the process of creating **collaborative** learning environments, relevant and worthwhile curricula, and innovative partnerships for the common good (Halabieh et al., 2022, p. 12; Sternberg, 2005, p. 203; Toker, 2022, p. 234). Halabieh et al. (2022) argued that curriculum relevance emphasizing the tools required for success in the workplace such as critical and creative thinking, problem-solving, co-operation, tolerance, and collaboration are essential elements for consideration by leaders in the education domain (p. 2). These concepts are important as educational leaders develop new generations of thinking to address critical issues across multiple disciplines (Halabieh et al., 2022, p. 3). Sternberg (2005) underscored that a model of educational leadership involves wisdom, intelligence, creativity, and synthesis; in particular, a great educational leader uses creativity to generate possible solutions of problems; analytical intelligence to evaluate the quality and depictions of solutions of problems; practical intelligence implements decisions and to persuade others of their value; and wisdom to ensure the help of the common good (p. 204).

Consistent with this perspective on the common good, Toker (2022) argued that educational leaders must, through education, create students that will become future leaders, who have clear visions and mission, as well as the ability to perform in the real-world (p. 234). Educational domain leaders should consider the relationships between the

historical, contemporary, and future contexts that current and future military and civilians will likely encounter and incorporate these elements into the education process. Moreover, adult learning theorist Cyril O. Houle (1996) argued that the fundamental system of education design centers on the idea that, "the analysis for planning educational activities must be based on the realities of the human condition and the state of constant change" (p.42). In light of the focus on building future leaders, these perspectives on educational leadership, collaboration, and relevance, coupled with Houle's (1996) view on the fundamental systems of education design suggests that educational and execution domain leaders should consider these concepts earlier in the professional development process for both buyers and sellers within the U.S. Government.

Methods

Analyzing the GRGB implementation process and the extent to which the GRGB methods improved education quality and student outcomes in cost analysis, price analysis, and contract negotiations higher education courses involved data collection and analysis using two parts within two related phases of the GRGB Process Framework (Figure 1). The first phase, Get Real, included two parts: (1) determining the current state of major weapon systems cost analysis, price analysis, and contract negotiations execution and education domains, and (2) establishing a standard through an analysis of execution and education domain data. The second phase for the GRGB, Get Real, also involved two parts: (1) identifying the problem and developing solutions included a comparison of the execution and domain data, as well using Kolb's (1984) experiential learning cycle within a higher education contexts, and (2) continuously improving and learning centered on analyzing course evaluations across four course offerings: Winter 2021, Summer 2021, Winter 2022, and Summer of 2022, respectively. This study explored three research questions:

1. How did an educational leader integrate the U.S. Navy's GRGB approach into existing cost analysis, price analysis, and contract negotiations curricula and course structure?
2. To what extent, if any, did the implementation of the GRGB approach improve or sustain student understanding of the cost analysis, price analysis, and contract negotiations principles?
3. What were the leadership outcomes, best practices, and lessons learned?

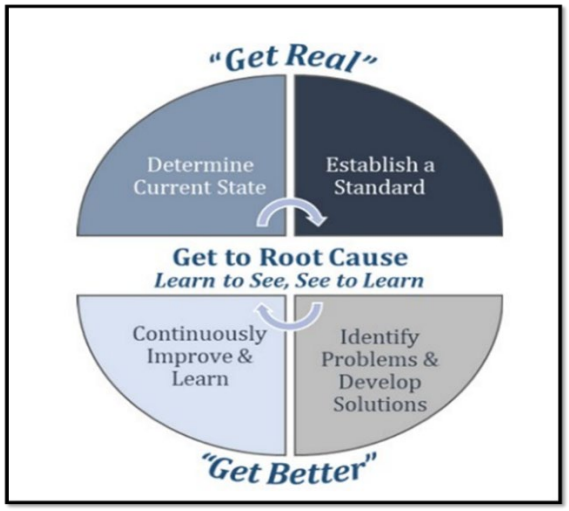


Figure 1. The GRGB Process Framework.
(U.S. Navy, 2021).

Get Real (GR): Determine the Characteristics of the Execution and Education Domains

To understand the characteristics of the Major Weapon System Cost/Price Analysis, and Contract Negotiations execution domain (GR part 1), data from the FY20–FY23 Department of Defense (DoD) Program Acquisition Cost by Weapon Systems were analyzed in terms of mission area categories, major defense contractors, and service departments. Corresponding Federal Procurement Next-Generation Data (FPDS-NG) were also analyzed for each major defense contractor in the FY20–FY23 DoD Program Acquisition Cost by Weapon System to gain insight into contract types, contract methods, appropriation types, and typical negotiation environments (sole-source, non-competitive, negotiations process) for each mission area category. The final analysis of the GR element involves a review of Zach Cooper's (2022) *Perceptions on the Feasibility of Implementing Innovative Cost and Pricing Analysis Software Across Naval Sea Systems Command*.

MN3320 Cost/Price Analysis and MN3321 Contract Negotiations student demographics, course content/design, and learning objectives, were analyzed to determine the characteristics of the higher education domain. First, student demographics were analyzed to understand the entry points into the acquisition career field. Second, course content/design were analyzed to understand the extent to which course content and structure were aligned with the major weapon systems cost/price analysis and contract negotiations processes. Third, learning objectives were categorized and aligned with course content according to progressive levels of theory and practice using Bloom's Taxonomy. Specifically, learning objective action verbs were categorized into one of six Bloom categories, representing the cognitive activities requirements for successful course completion.

GR: Establishing Alignment as a Standard

The results from the education domain analysis results were compared to execution domain results to determine opportunities for alignment and the rationale to establish a standard. The intellectual foundation for this standard involved Houle's (1972) fundamental system of education design and Kolb's (1984) experiential learning theory.

Get to the Root Cause: Learn to See and See to Learn

As depicted in Figure 1, this phase of the process, establishing a standard, is based on understanding potential root causes and informs the bridge to between the GR and GB phases. After understanding the alignment opportunities between the cost/price analysis execution and education domains, additional class and researcher observations were considered to understand to potential root cause.

GB: Identify Problems and Solutions, Continuously Improve and Learn

Data from the preceding GR phase were analyzed to develop potential solutions and to continuously improve. Continuous Improvement and Learning centered on incorporating Kolb's (1984) Experiential Learning Model into a more cohesive course design for MN3320/MN3321 Cost Analysis, Price Analysis, and Contract Negotiations.

Regarding continuous improvement and learning, course evaluation forms (CEFs) were analyzed from each of the eight course offerings in Winter 2021, Summer 2021, Winter 2022, and Summer 2022, respectively. CEF statements included five statements in three categories related to learning, course content and design, and instructor performance.

Results

Analysis of the FY20–FY23 Program Acquisition Costs by Weapon System and the corresponding FPDS-NG data revealed several characteristics of the Major Weapon Systems Acquisition cost analysis, price analysis, and contract negotiations execution domain. Table 1 shows that between FY20 and FY23, the DoD and service components acquired 83 Major Defense Acquisition Programs (MDAPs) across seven primary mission area categories: Aircraft and Related Systems, C4I Systems, Ground Systems, Missile Defense, Munitions, RDT&E, Shipbuilding and Space Programs.

Table 1. Mission Area Categories.
(DoD, 2022).

Mission Area Category	Count of Major Weapon Systems Summary
Aircraft and Related Systems - Joint Service	6
Aircraft and Related Systems - US Air Force	11
Aircraft and Related Systems - US Army	3
Aircraft and Related Systems - US Navy / US Marine Corps	7
C4I Systems - Joint Service	1
C4I Systems - US Army	1
Ground Systems - Joint Service	1
Ground Systems - US Army	6
Ground Systems - US Marine Corps	1
Missile Defeat and Defense Programs - Joint Service	3
Missile Defeat and Defense Programs - US Army	2
Missiles and Munitions - Joint Service	4
Missiles and Munitions - US Air Force	3
Missiles and Munitions - US Army	2
Missiles and Munitions - US Navy	4
Missles and Munitions - Joint Service	6
Missles and Munitions - US Army	1
Shipbuilding and Maritime Systems - US Navy	11
Space Based Systems - US Air Force	10
Grand Total	83

Table 2 captures fifteen major defense contractors (MDC) who produce and sustain these weapon systems across the mission area categories. For example, as a prime or subcontractor, Lockheed Martin produced and sustained between 11 and 15 MDAPs. The Boeing Company produced and sustained at least 10 MDAPs across the remaining mission area categories as either a prime or subcontractor.

Table 2. Mission Area Categories Major Defense Contractors.
(DoD, 2022).

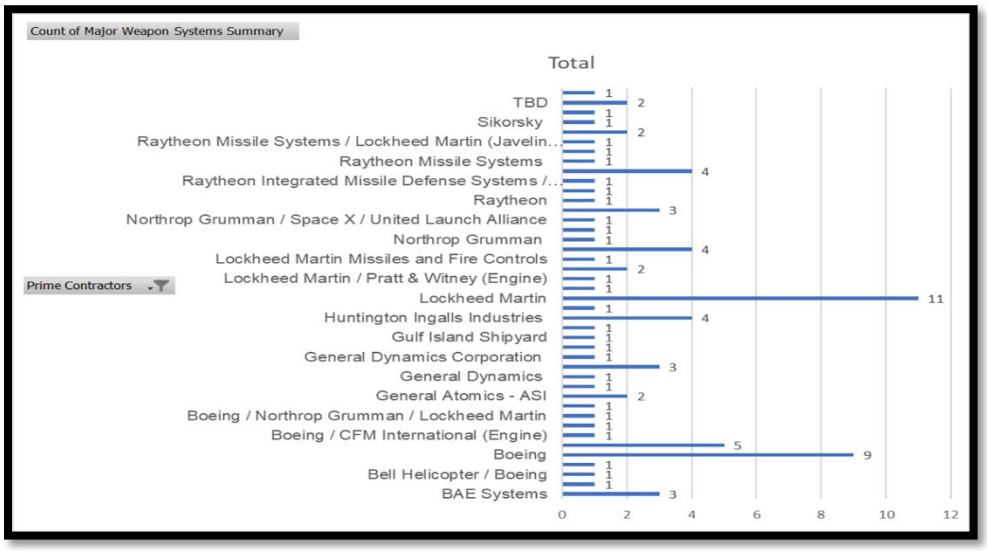


Table 3. Major Defense Contractors and Execution Domain Characteristics. (FPDS-NG, 2023).

Mission Area Category	Count of Weapon Systems
Aircraft and Related Systems - Joint Service	6
C-130J Hercules	1
Lockheed Martin	1
FA862520D3000	1
FAR 15 Sole-Source	1
O &S Sustainment	1
Multiple Types	1
Procurement, RDT&E	1
F-35 Joint Strike Fighter	1
Lockheed Martin / Pratt & Witney (Engine)	1
N0001917C0001	1
FAR 15 Sole-Source	1
O &S Sustainment	1
Fixed Price Incentive / Cost	1
Procurement, RDT&E, FMS	1
MQ-1B / MQ-1C Predator/Gray Eagle	1
General Atomics - ASI	1
W58RGZ19C0027	1
FAR 15 Sole-Source	1
O &S Sustainment	1
CPIF	1
O&M	1
MQ-4C /RQ-4 Triton/GlobalHawk/NATO AGS	1
MQ-9 Reaper	1
V-22 Osprey	1
Grand Total	6

Mission Area Category	Count of Weapon Systems
Aircraft and Related Systems - Joint Service	6
C-130J Hercules	1
F-35 Joint Strike Fighter	1
MQ-1B / MQ-1C Predator/Gray Eagle	1
MQ-4C /RQ-4 Triton/GlobalHawk/NATO AGS	1
Northrop Grumman	1
N0001919C0008	1
FAR 15 Sole-Source	1
O &S Sustainment	1
FFP	1
Procurement	1
MQ-9 Reaper	1
General Atomics - ASI	1
FA868920D2020	1
FAR 15 Sole-Source	1
O &S Sustainment	1
FPIF	1
Procurement	1
V-22 Osprey	1
Bell Helicopter / Boeing	1
N0001917C0015	1
FAR 15 Sole-Source	1
O &S Sustainment	1
Fixed Price Incentive / Cost	1
Procurement, O & M	1
Grand Total	6

Results from the corresponding mission area category FPDS-NG data revealed service component contracting organizations typically used various contract types and Federal Acquisition Regulation (FAR) Part 15 Contract by Negotiations (non-competitive/sole source). Table 3 shows the following characteristics of the Aircraft and Related Systems—Joint Service for the C-130J FY20–FY23:

- C-130J Hercules Prime Contractor: Lockheed Martin
- Procurement Instrument Identifier: FA862520D300
- Contract Method: Contract by Negotiation (Sole-Source)
- Acquisition Life Cycle Phase: Operations and Sustainment
- Contract Types: Multiple Types
- Appropriation Types: Procurement and RDT&E

These results were not only consistent across remaining MDAPs in this mission area category, but also the remaining six mission area categories in Table 1.

Table 4. Major Weapon Systems Execution Domain Process Characteristics. (Poree, 2023).

Characteristics of Major Weapon Systems Cost Analysis, Price Analysis, and Contract Negotiations Environment	Execution Domain	
	Buyers	Sellers
83 Major Defense Acquisition Programs	X	X
Appropriation Types: RDT&E, Procurement, and O&M	X	X
Contract Types: Cost and Fixed Priced Variants	X	X
Contract Methods: FAR 15 Contract by Negotiations (Sole-Source)	X	X
Sole-Source Contracting Process	X	X
Buyers Release Request for Proposal (RFP) (Letter)	X	
Sellers Receive RFP		X
Sellers Develop Proposals Using Software		X
Buyers Receive Seller's Proposal / Determine Adequacy	X	
Buyers Conduct Fact-Finding	X	X
Technical Evaluations (Excel Spreadsheets)	X	
Proposal Analysis Software	/	X
Cost/Price Analysis (Active / Buyer-Developed Excel Spreadsheets)	X	
Pre-Price Negotiation Memorandum	X	
Business Clearance	X	
Negotiations (Using Proposal Analysis Software)	/	X
Final Price Negotiation Memoradum	X	
Contract Clearance	X	
Contract Award	X	X

Table 4 captures the 83 MDAPs, common appropriation types, typical contract method/types, and the supporting sole-source contracting process in the execution domain. The "X" indicates buyer and seller participation and awareness of the execution domain task or characteristic. The "/" indicates a limited buyer or seller awareness of the execution domain task or characteristic. These particular results were captured during the first week of each course. Supporting a limited buyer awareness exists regarding the seller's use of proposal development software, Cooper's (2022) study, Perceptions on the Feasibility of Implementing Innovative Cost/Price Analysis Software in Naval Sea Systems Command (NAVSEA), concluded that some organizations such as Navy Strategic Systems Programs, the F-35 Joint Strike Fighter Program Office implemented ProPricer Government Edition (GE) software to analyze proposal with favorable outcomes. However, other organizations such as Naval Sea Systems Command (NAVSEA) were unaware of the software (p. i). By extension, buyers also had a limited awareness of using the ProPricer GE in the negotiations process. Conversely, Cooper's (2022) study also showed that nine of the 10 major defense contractors used ProPricer Contrator's Edition to develop proposals.

Table 5. Education Domain Characteristics: Students Demographics. (Poree, 2023)

Course	Number of Military	Number of Civilians	Total
MN3320/MN331 Winter 2021	31		31
MN3320/MN331 Summer 2021	10	24	34
MN3320/MN331 Winter 2022	22		22
MN3320/MN331 Summer 2022	10	14	24
Grand Total			**111**

Analysis of the student demographics for each course offerings in Table 5 revealed a total of 111 students participated during this evaluation period; 31 active-duty students from different service components and entry points in the career field participated in MN3320/MN3321 in Winter 2021. A total of 34 active-duty military and civilians participated in MN3320/MN3321 in Summer 2021. In Winter 2022, a total of 22 active-duty military participated in the courses. Finally, a diverse group of active-duty military and DoD civilians participated in the educational events in Summer 2022.

Table 6. Major Weapon Systems Execution and Education Domain Comparison. (Poree, 2023).

Characteristics of Major Weapon Systems Cost Analysis, Price Analysis, and Contract Negotiations	Execution Domain		Education Domain		Alignment Areas	
	Buyers	Sellers	Buyers	Sellers	Buyers	Sellers
83 Major Defense Acquisition Programs	X	X	/	X	X	X
Appropriation Types: RDT&E, Procurement	X	X	/	X	X	X
Contract Types: Cost and Fixed Priced Variants	X	X	X	X		
Contract Methods: FAR 15 Contract by Negotiations (Sole-Source)	X	X	X	X		
Sole-Source Contracting Process	X	X	X	X		
Buyers Release Request for Proposal (RFP) (Letter)	X		X			
Sellers Receive RFP		X	X	X		
Sellers Develop Proposals Using Software		X	X	X	X	X
Buyers Receive Seller's Proposal / Determine Adequacy	X		X	X		
Buyers Conduct Fact-Finding	X	X	X	X		
Technical Evaluations (Excel Spreadsheets)	X		X			
Proposal Analysis Software	/	X	X	X	X	X
Cost/Price Analysis (Active / Buyer-Developed Excel Spreadsheets)	X		X			
Pre-Price Negotiation Memorandum	X		X			
Business Clearance	X		X			
Negotiations (Using Proposal Analysis Software)	/	X	X	X	X	X
Final Price Negotiation Memoradum	X		X			
Contract Clearance	X		X			
Contract Award	X	X	X	X		

A comparison of the Execution Domain and Education Domains revealed cost/price analysis and contract negotiations concepts captured in the course content as indicated by a *black "X*." A *red "X"* indicated concepts not captured in the initial course content; with concepts partially addressed in the course content, captured by the *red "/"* in Table 6. For example, in the Education Domain course concepts highlighted major weapons, but did not specifically address the 83 MDAPs, common major defense contractors, contract methods, contract types and the sole-source contract negotiations captured in Table 1 and Table 2 above. Further, the results showed a limited awareness regarding sellers and buyers using ProPricer CE and ProPricer GE to develop and analyze proposals, as well as using the software in the contract negotiations process.

The Execution and Education Domain Comparison also revealed areas of alignment as indicated by a green "X." The first area, 83 MDAPs, highlighted opportunities to focus on the top 15 major defense contractors in Table 1 and the characteristics of the Execution Domain identified in Table 3. The results also showed several additional opportunities to align domains more closely by bringing a higher level of awareness of: common appropriation types, seller's proposal development software, buyer's proposal analysis software, conducting contract negotiations with the software.

Table 7. Education Domain: Informing Experiential Learning, Cohesive Course Design. (Poree, 2023)

Characteristics of Major Weapon Systems Negotiations Environment	**MN3320/MN3321**		**Cohesive Course Design**		**Kolb's Experiential Learning Cycle**	**Bloom's Taxonomy**
	Buyers	Sellers	Weeks	Themes /Activity	Kolb's Learning Cycle Elements	Bloom's Taxonomy Level
83 Major Defense Acquisition Programs	X	X	1	Understand Environment (Lecture)	Concrete Experience	Understanding
Appropriation Types: RDT&E, Procurement, and O&M	X	X	1	Understand Environment (Lecture)	Concrete Experience	Understanding
Sellers Develop Proposals Using Software	X	X	3	ProPricer GE Lab 2 Sellers Receive RFP / Lecture	Concrete Experience Reflective Observation	Evaluating and Creating
Proposal Analysis Software	X	X	4	ProPricer GE Lab 3 Technical Evaluations / Lecture	Abstract Conceptualization	Analyzing
Negotiations (Using Proposal Analysis Software)	X	X	6, 7, 8	ProPricer GE Lab 5: Turning Offers and Counteroffers	Abstract Conceptualization Active Experimentation	Evaluating and Creating

The preceding results in Tables 1 through 6, and the alignment opportunities in Table 7 (i.e., 83 MDAPs, Appropriation Types, Sellers Develop Proposals Using Software, and Negotiations Using Proposal Analysis Software) resulted in a more cohesive course design

that incorporated ProPricer GE labs into the cost/price analysis and contract negotiations education process. Analysis resulted in incorporating ProPricer GE in week two and three, with an emphasis on concrete experiences and Bloom Taxonomy Level of Evaluating and Creating.

Table 8. Course Evaluation Form Scores and Outcomes by Course Offering. (Python, 2021, 2022)

Course Evaluation Statements	MN20 W-21	MN21 W-21	MN20 S-21	M21 S-21	MN20 W-22	MN21 W-22	MN20 S-22	MN21 S-22	Avg.	Total	% Of Total
1.1. I developed new skills and abilities.	4.80	4.87	4.37	4.42	4.82	4.86	4.92	4.92	4.75	5.00	95%
1.2. I improved my understanding of the subject.	4.83	4.83	4.37	4.32	4.91	4.82	4.92	4.92	4.74	5.00	95%
1.3. I strengthened my analytic capabilities.	4.77	4.77	4.32	4.32	4.77	4.86	4.92	4.92	4.71	5.00	94%
1.4. I enhanced my ability to think critically.	4.70	4.70	4.26	4.26	4.82	4.86	4.92	4.92	4.68	5.00	94%
1.5. Overall, I learned a great deal.	4.77	4.80	4.21	4.21	4.86	4.86	4.92	4.92	4.69	5.00	94%
2.1. The course material engaged me in the subject matter.	4.63	4.86	4.37	4.35	4.86	4.91	5.00	5.00	4.75	5.00	95%
2.2. The course assignments reinforced course content.	4.67	4.79	4.42	4.45	4.86	4.91	5.00	5.00	4.76	5.00	95%
2.3. The course content was relevant to my program of study.	4.87	4.93	4.53	4.60	4.82	4.86	5.00	5.00	4.83	5.00	97%
2.4. This course was academically challenging.	4.63	4.71	4.21	4.40	4.86	4.82	4.75	4.83	4.65	5.00	93%
2.5. Overall, the course was well designed.	4.66	4.79	4.21	4.20	4.91	4.91	4.75	4.75	4.65	5.00	93%
3.1. The instructor created a productive classroom environment.	4.90	4.83	4.50	4.50	4.91	4.91	5.00	5.00	4.82	5.00	96%
3.2. The instructor encouraged student participation.	4.90	4.90	4.72	4.70	4.91	4.91	5.00	5.00	4.88	5.00	98%
3.3. The instructor was helpful when I had difficulties or questions.	4.83	4.90	4.56	4.55	4.91	4.91	5.00	5.00	4.83	5.00	97%
3.4. The instructor provided constructive feedback.	4.87	4.87	4.50	4.40	4.95	4.91	5.00	5.00	4.81	5.00	96%
3.5. Overall, the instructor was effective in teaching this course.	4.87	4.87	4.50	4.30	4.95	4.91	5.00	5.00	4.80	5.00	96%

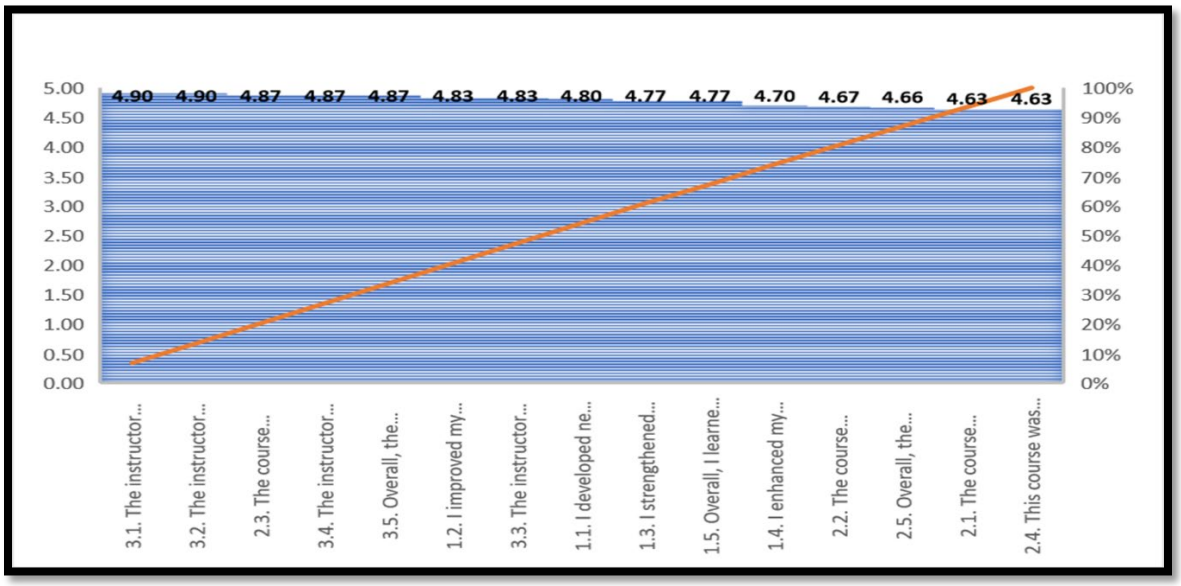
In Table 8, Course Evaluation Form (CEF) scores from Winter 2021, Summer 2021, Winter 2022, and Summer 2020, revealed a range of consistent average scores across 15 CEF statements. CEF design captured three question categories based on learning, content

and course design, and instructor performance, with five questions related to each question category, for a total of 15 questions. The response options were based on a six-point Likert Scale, with 0 = No Comment, 1 = Strongly Disagree, 2 = Disagree, 4 = Agree, 5 = Strongly Agree, respectively.

Data Collection Procedures. Data collection procedures included capturing course evaluation form data at the end of each 12-week course offering for MN3320 and MN3321, anonymously and online. Data Analysis. Descriptive statistics were used to analyze course participant responses from eight class offerings: Winter 2021, Summer 2021, Winter 2022, and Summer 2022, respectively. participant CEF responses 83 out of 111 course participants completed CEFs for MN3320 Cost/Price Analysis: 84 out of 111 course participants from MN3321 Contract Negotiations, resulting in 75% and 76% response rates, respectively.

For Learning Outcome Statements 1.1–1.5, the average scores were 4.75, 4.74, 4.71, 4.68, and 4.69, respectively. Course Content and Course Design Statements, statements 2.1–2.5, the average scores were 4.75, 4.76, 4.83, 4.65, and 4.65. Finally, Instructor Performance Statements (Leadership) 3.1–3.5, the average scores across the period were 4.82, 4.88, 4.83, 4.81, and 4.80. The overall average for all CEF scores across the 15 statements ranged from 4.65–4.88 or 93%–98%, respectively.

Table 9. Course Evaluation Form Data in Descending Frequency Order.
(Poree, 2023; Python 2021, 2022).



Finally, Table. 9 shows the CEF score data in descending frequency order. The results changed the initial order of the CEF statements to the following:

- 3.1 The instructor created a productive environment for the class (4.90/5.00 or 98%).
- 3.2 The instructor encouraged student participation (4.90/5.00 or 98%).
- 2.3 The course content was relevant to my program (4.87/5.00 or 97.4%).
- 3.4 The instructor provided constructive feedback (4.87/5.00 or 97.4%).
- 3.5 Overall, the instructor was effective in teaching (4.87/5.00 or 97.4%).
- 1.2 I improved my understanding of the subject (4.835/5.00 or 96.6%).
- 3.3 The instructor was helpful when I had difficult questions (4.83/5.00 of 96.6%).

- 1.1 I developed new skills and abilities (4.80/5.00 or 96%).
- 1.3 I strengthened my analytical capabilities (4.77/5.00 or 95.4%).
- 1.5 Overall, I learned a great deal (4.77/5.00 or 95.4%).
- 1.4 I enhanced my ability to think critically (4.70/5.00 or 94%).
- 2.2 The course assignments reinforced course content (4.67/5.00 or 93.4%).
- 2.5 Overall, the course was well designed (4.66/5.00or 93.2%).
- 2.1 The course material engaged me in the subject matter (4.63/5.00 of 93.2%).
- 2.4 This course was academically challenging (4.63/5.00 of 92.6%).

Discussion

The results of the research, as presented in Tables 1 through 9, revealed the process of implementing the GRGB methodology into existing cost/price analysis and contract negotiations course, the extent to which the GRGB implementation process improved or sustained student understanding of the cost/price analysis and negotiation principles, and the leadership outcomes and best practices.

Get Real: Assess and Align Execution and Education Domains

The process of implementing the GRGB process into cost/price analysis and contract negotiation courses began with using the Get Real concept to assess the major weapon systems execution domain. Table 1 captured 83 MDAPs across seven mission area categories that the Department of Defense either conducted research and development test and evaluation activities or invested in more capabilities, FY20–FY23 (DoD Budget Requests, 2020–2023). This data provided insight into acquisition patterns in the major weapon systems execution domain. Further, Table 2 showed the corresponding FPDS-NG data and highlighted the common suppliers, contracting types, contracting methods, appropriation types, and acquisition life cycle phase. For example, there are a limited number of major defense contractors in the Aircraft and Related Systems—Joint Service category, with contracts awarded under FAR Part 15 Contract by Negotiations (Sole-Source). The primary contract types are Fixed Price Incentive and Cost and the typical appropriation types are procurement, RDT&E, FMS. Finally, most of the MDAPs are in the Operations and Sustainment Phase of the Acquisition life cycle. Information Tables 3 and 4, which shows the supporting sole-source contracting process, provided characteristics of the execution domain and the realities of the emission area. Adult learning theorist Cyril O. Houle (1996) argued that the fundamental system of education design centers on the idea that, “the analysis for planning educational activities must be based on the realities of the human condition and the state of constant change” (p.42).

Armed with the intellectual foundation and data to establish the characteristics of the major weapon systems execution domain, the next logical step in the GR approach involved assessing the major weapon systems education domain to understand gaps and alignment opportunities. Table 4 captured the demographic results for the MN3320 and MN3321 course offerings, Winter 2021, Summer 2021, Winter 2022, and Summer 2022, respectively. The results showed a wide range of active-duty military and Department of Defense civilians with different entry points into the acquisition and contracting career field as well as experiences. The analysis and comparison of the major weapon systems cost/price analysis and contract negotiations execution and education domains revealed several alignment opportunities. As depicted in Table 5, alignment opportunities included incorporating: (1) more information of the 83 MDAPs, (2) common appropriate types, (3) common contract types, (4) the sellers use of software to develop proposal, (5) buyers use of proposal analysis software, and (6) the use of the software by both buyers and sellers in a simulated

business environment. Collectively, this formed the basis to incorporate ProPricer Government Edition (GE) into the course content, thereby, establishing a more cohesive course design.

Get Better: Use Kolb's Experiential Learning Model, ProPricer GE, and Cohesive Design

A shown in Table 7, this data informed the use of Kolb's (1984) experiential learning theory to support the incorporation of ProPricer GE into the course content and design. In brief, the knowledge sequence involved lectures to familiarize student with cost/price analysis and contract negotiations concepts and then a ProPricer Lab to reinforce the concepts through a concrete experience, reflective observations, abstract conceptualizations, and active experimentation. Specifically, students encounter a concrete experience through the introductory lab, and then complete the rest of the experiential learning cycle through different phases of the course to include reflective observations, abstract conceptualization, and active experimentation in the contract negotiations phase, between weeks six and seven.

As shown in Table 8, students from a total of eight experiential learning experiences completed CEF for courses under the revised coursed design, Winter 2021, Summer 2021, Winter 2022, and Summer 2022. MN3320/MN3321 students across the eight courses scored no less than an average of 4.68 (or 94%) on statements 1.1–1.5 related to learning outcomes such as understanding cost/price analysis and contract negotiations skills, enhancing analytical skills, increasing the ability to think critically. The scores for statements 2.1–2.5, related to course content and design, showed average scores of no less than 4.65 (or 93%). Finally, the instructor-related leader and collaboration statements 3.1–3.5 revealed scores no lower than 4.81 (or 96%) in this assessment area. This suggests that a wide range of active-duty military and DoD civilians with diverse cultural backgrounds viewed the course content and design favorably. These results are significant in that DoD civilians in the distance learning program experienced both the educational and execution domain simultaneously. Results such as these are consistent with Von Bertallanfy's (1972) General Systems Theory (GST) in that the researcher considered the interactions of one part of the system on the whole and the growing technological demands of the system in the process, as well Schein's (2017) perspective on organizational culture and leadership.

The Importance of Educational Leadership, Collaboration, and Relevance

Educational leadership, collaboration, and relevance are essential in using the GRGB methodology in a DoD higher education context. Table 9 captured a reordering of the CEF statement based on a descending frequency order, with leadership, collaboration, and relevance-related statements capturing the upper third of the reordered statements. In particular, of the original 15 CEF statements in numerical order, statements 3.1, 3.2, 2.3, 3.4, and 3.5 were the top five statements based on descending order frequency. Statement 3.1, "The instructor created a productive environment for the class," suggests a favorable relationship to leadership and collaboration. This is also consistent with the second statement in the new order, 3.2. The third statement in the revised order, 2.3, "The course content was relevant to my program," suggests high support for relevance to students and practitioners. Similarly, the middle third of responses captured similar themes with statements 1.2, 3.3, 1.1, 1.3. The lower-third statement order included statements 1.4, 2.2, 2.5, 2.4 (the course content-related statements). The combined reordered responses suggest that educational leadership, collaboration, and relevance are critical element in the GRGB process, with an aim of educating a diverse group of active-duty military and DoD civilians, consistently.

Leadership Lessons, Best Practices, and Lessons Learned

Underpinning the leadership and course outcomes are several best practices. The first best practice is to establish a collaborative partnership with the developers of ProPricer GE to bring the software to the classroom. This collaborative relationship was established early in the planning phase based on the researcher's personal experience with the software in 2015. The next best practice is to consider both quantitative data and qualitative data in the Get Better continuous improvement phase by asking questions and documenting observations. For example, the initial introduction to ProPricer GE included a total of seven (CLINs) in the scenarios, with seven tasks and associated basis of estimates, for students in the Winter of 2021. During the course students struggled with applying concepts across seven CLINs and this was also reflected in CEF comments. As a result, the next course offering included a total of four CLINs in the scenario. The final best practice is to continuously improve. While the major weapon system execution domain has frequent acquisition patterns in terms of major defense contractors, contract types, contract, etc., the dynamics of the environment are constantly changing. Therefore, educational leaders must also consider Sternberg's (2005) model of educational leadership which includes involves wisdom, intelligence, creativity, and synthesis for the common good (p. 204). In particular, consideration of the common good should also include the wisdom to identify researcher limitations in the process.

Limitations

While the preceding tables and results demonstrate the efficacy of the GRGB methodology in a higher education context from the researcher's perspective, several study limitations exist. First, an auto-phenomenological study relies on the researcher's personal experience and, therefore, is inherently subjective. Second, other researchers may interpret the same phenomenon differently, which could lead to inconsistencies in the findings. Third, studies such as these can also introduce researcher bias, making it difficult to separate the phenomenon under study from personal experience. Including objective CEF data from anonymous participants was one way to balance limitations.

Conclusion and Recommendations for Future Research

This auto-phenomenological study examined the lived experience of an educational leader's implementation of the U.S. Navy's Get Real, Get Better (GRGB) methodology to innovate higher education cost/price analysis and contract negotiation courses and the roles of educational leadership, collaboration, and relevance in the process. Key findings show these interrelated concepts are essential in the GR and GB methodology phases. The GR phase requires educational leadership, collaboration, relevance to assess the education and execution domain gaps to align educational activities with realities of the major weapon systems cost/price analysis and contract negotiations mission area. Educational leadership, collaboration, and relevance are also essential to incorporating ProPricer GE proposal analysis software and Kolb's (1984) experiential learning models to support a revised, cohesive course design. This cohesive course placed active-duty and DoD civilians in an active cost/price analysis, and contract negotiations environment aligned with the realities of the mission area. Students from diverse organizational cultural backgrounds, and with different learning styles increased the ability to think critically about major weapon systems cost/price analysis and contract negotiations principles in and active learning business environment. While this research focused on innovating cost/price analysis and contracting in higher education, where military and civilian members participate, future research should focus on the feasibility of establishing a framework to sequencing Government-Industry co-education in an environment where government buyers and actual major defense contractor

sellers go through the process in the education domain, well before conducting cost/analysis and contract negotiations in a dynamic and hyper-turbulent major weapon systems execution domain. Future researchers should also consider the extent to which educational leadership, collaboration, and relevance support the GRGB methodology to align in other functional area education and execution domains.

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