NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

MBA PROFESSIONAL REPORT

GSBPP CAPSTONE REVIEW

December 2016

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The Graduate School of Business and Public Policy (GSBPP) is committed to a process of continuous improvement throughout all business practices, to include its present approach to facilitating student capstones (i.e., projects and theses). The first step in any process improvement effort is to accurately define the existing, as-is state of the process to be improved. The project team seeks to describe the existing GSBPP approach to facilitating student capstones through careful data collection and analysis from multiple sources, including the GSBPP exit survey, archived GSBPP capstones, faculty advisement data, faculty interviews, and a new GSBPP student survey in order to detail the capstone's process, content, and value to multiple stakeholders. The project team also employs the Plan-Do-Study-Act framework for continuous process improvement throughout. It is not within the scope of this report to understand, control, or improve the current GSBPP approach to facilitating student capstones. Rather, this report only collects and presents data about the current approach so that GSBPP can understand it, control it, and improve it insofar as GSBPP finds it advantageous to do so.

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GSBPP CAPSTONE REVIEW

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Submitted in partial fulfillment of the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

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December 2016

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GSBPP CAPSTONE REVIEW

ABSTRACT

The Graduate School of Business and Public Policy (GSBPP) is committed to a process of continuous improvement throughout all business practices, to include its present approach to facilitating student capstones (i.e., projects and theses). The first step in any process improvement effort is to accurately define the existing, as-is state of the process to be improved. The project team seeks to describe the existing GSBPP approach to facilitating student capstones through careful data collection and analysis from multiple sources, including the GSBPP exit survey, archived GSBPP capstones, faculty advisement data, faculty interviews, and a new GSBPP student survey in order to detail the capstone's process, content, and value to multiple stakeholders. The project team also employs the Plan-Do-Study-Act framework for continuous process improvement throughout. It is not within the scope of this report to understand, control, or improve the current GSBPP approach to facilitating student capstones. Rather, this report only collects and presents data about the current approach so that GSBPP can understand it, control it, and improve it insofar as GSBPP finds it advantageous to do so.

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LIST OF ACRONYMS AND ABBREVIATIONS

9MM	9-Month Model
AACSB	Association to Advance Collegiate Schools of Business
CI Handbook	*Handbook on Continuous Improvement Transformation: The Lean Six Sigma Framework and Systematic Methodology for Implementation*
DOD	Department of Defense
GSBPP	Graduate School of Business and Public Policy
IRB	Institutional Review Board
JPME	Joint Professional Military Education
LSS	Lean Six Sigma
NASPAA	Network of Schools of Public Policy, Affairs, and Administration
NPS	Naval Postgraduate School
OPNAVINST	Office of the Chief of Naval Operations Instruction
PDSA	Plan-Do-Study-Act
RFI	Request for Information
ROI	Return on Investment
SOF	Student Opinion Form
V.O.B.	Voice of the Business
V.O.C.	Voice of the Customer
V.O.P.	Voice of the Process

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I. MOTIVATION

A. THE THESIS REQUIREMENT AT NPS AND GSBPP

The requirement for Naval Postgraduate School (NPS) students to complete a thesis (or equivalent) is reflected in the Office of the Chief of Naval Operations Instruction (OPNAVINST) 5450.210D, *Naval Postgraduate School Mission and Functions*, dated 30 March 2012. The instruction prescribes 31 functions that NPS must perform. Function #11 states that NPS will coordinate and approve student officer research while maintaining a strong, relevant, and viable faculty research effort to support student and Department of Defense (DOD) research requirements. According to the instruction, student research should aid national defense by developing or advancing processes, materials, and technologies for future military service applications (Office of the Chief of Naval Operations [OPNAV], 2012).

The thesis is the primary instrument for NPS to coordinate, approve, and support student research as prescribed in OPNAVINST 5450.210D. The OPNAVINST instructions inform NPS academic policy—all master degree programs at NPS require "a thesis or its equivalent, except in cases where the Academic Council has specifically approved a course-only option or curricula (Naval Postgraduate School [NPS], 2015b, p. 11)."

Appendix D of the NPS *Academic Policy Manual*, approved 16 September 2015, details five requirements for obtaining a Master of Business Administration (MBA) from the Graduate School of Business and Public Policy (GSBPP). The fourth requirement stipulates that each student will complete an *acceptable* (emphasis added) application project or thesis as a requisite to earning the MBA degree (NPS, 2015b, Appendix D).

From the above, the two main purposes of the thesis (or its equivalent) are summarized as to 1) satisfy NPS graduation requirements and 2) support the national defense through advancing future military service applications.

B. GSBPP SEEKS CONTINUOUS IMPROVEMENT

The drive for continuous improvement at GSBPP may be linked to the NPS strategic plan. In support of its mission and vision, NPS identified four main goals in its

strategic plan, *Vision for a New Century*, upon which the university will engage its primary efforts. NPS's No. 1 goal is to "sustain continuous improvement in the quality and relevance of [its] graduate education and research programs" (NPS, 2008, p. 3). Concerning this goal, NPS has instituted several policies and procedures that are designed to foster continuous improvement at the university. For instance, NPS schools and academic departments conduct recurring curriculum reviews. NPS also maintains university accreditations and collects student opinion forms (SOFs) following each academic term. In turn, GSBPP has adopted many of these practices and has even designed others for its own use, like developing a detailed workload management tool (the 9-month model, or 9MM) that focuses on faculty development.

However, continuous improvement at GSBPP is not only about achieving university goals. Continuous improvement supports GSBPP directly through attaining (and retaining) prominent accreditations and research funding.

1. AACSB Accreditation

Attaining the Association to Advance Collegiate Schools of Business (AACSB) accreditation demands evidence of continuous improvement. Having achieved AACSB accreditation, GSBPP is committed to a process of annual and periodic continuous improvement reviews. During each review, GSBPP must "summarize and document key continuous improvement successes, innovations, and achievements since the last AACSB accreditation review or for at least the past five years produce evidence showing key continuous improvement successes, innovations, and achievements since the last AACSB accreditation review" (Association to Advance Collegiate Schools of Business [AACSB], 2016, p. 15). GSBPP must also document its plans for continuous improvement in the future (AACSB, 2016, p. 16).

2. NASPAA Accreditation

Similar to AACSB, the Network of Schools of Public Policy, Affairs, and Administration (NASPAA) evaluates GSBPP on program design features and continuous improvement with respect to the NASPAA accreditation standards (Network of Schools of Public Policy, Affairs, and Administration [NASPAA], 2014).

3. Research Funding

Per the 9MM, most GSBPP tenure-track faculty members devote one academic quarter (approximately 2.25 months) to performing reimbursable research for external stakeholders within the DOD. The 9MM further directs GSBPP tenure-track faculty members to dedicate a separate academic quarter for service, research, and advising (funded by the NPS Provost and Academic Dean) (Graduate School of Business and Public Policy [GSBPP], 2009).

Reimbursable research is critical to mission success at NPS considering that reimbursable income is the university's largest funding source (39 percent, see Figure 1). External stakeholders are encouraged to provide funds to NPS when they perceive that the university adds value for their organizations through its continuous quality improvement efforts.

C. CONTINUOUS IMPROVEMENT REQUIRES A FIRM UNDERSTANDING OF THE EXISTING (AS-IS) STATE

Given the importance of continuous improvement to the institution, GSBPP is committed to a process of continuous improvement efforts. Lean Six Sigma (LSS) Master Black Belt (highest degree), Aristide van Aartsengel, refers to data collection as "the fundamental engine" for any process improvement effort (Aartsengel & Kurtoglu, 2013b, p. 623). In his co-authored text, *Handbook on Continuous Improvement Transformation: The Lean Six Sigma Framework and Systematic Methodology for Implementation* (hereafter, CI Handbook), Aartsengel champions effective data collection as the starting point for initiating process improvement projects:

> If you cannot collect appropriate data on a process, you cannot understand what that process is doing or your understanding of it is meager. If you cannot understand what the process is doing or your understanding of it is meager, you cannot control it. If you cannot control it, you cannot improve it. (Aartsengel & Kurtoglu, 2013b, p. 624)

What Aartsengel & Kurtoglu is describing here is the existing, as-is state of the "process to be improved"—the specific process, activity, or outcome that the business

enterprise seeks to enhance (p. 27). For our purposes, the process to be improved is the GSBPP approach to facilitating student projects and theses.

It is not within the scope of this report to understand, control, or improve the GSBPP approach to facilitating student projects and theses. Rather, this report only collects and presents data about the current approach so that GSBPP can understand it, control it, and improve it insofar as the GSBPP finds it advantageous to do so. This is the essence of data collection, "to build, as precisely as possible, a factual understanding of existing process to be improved conditions and problems or causes of underperformance" (Aartsengel & Kurtoglu, 2013b, p. 75). The CI Handbook discusses three vital sources (or "voices") for obtaining data about the process to be improved: the voice of the customer, voice of the process, and voice of the business.

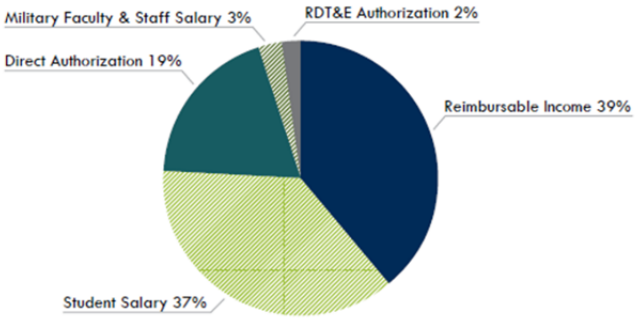
According to Aartsengel and Kurtoglu (2013b), the voice of the customer (V.O.C.), "represents the stated and unstated needs, wants, and desires of the customers and stakeholders, generally referred to as the customers and stakeholders' requirements" (p. 69). For the purposes of this report, V.O.C. is sourced from GSBPP students. However, the project team acknowledges that other V.O.C. sources exist in the form of external DOD stakeholders who sponsor or otherwise benefit from student research. GSBPP alumni can provide V.O.C. data, as well.

The voice of the process (V.O.P.) examines the resources required to transform inputs into outputs (Aartsengel & Kurtoglu, 2013b, p. 69). The project team will examine archived GSBPP projects and theses in order to source the voice of the process.

Aartsengel and Kurtoglu (2013b) describe the voice of the business (V.O.B.) as "the voice of profit and return on investment. Every process improvement project has to enable enterprise business sustainability and meet the needs of the employees and shareholders" (p. 69). For our purposes, the project team sources V.O.B. from the GSBPP faculty. Notwithstanding our selection, the project team acknowledges that additional sources of V.O.B. exist in the form of mission statements, policy memorandums, and similar proclamations from GSBPP.

TOTAL OPERATIONS & COMMUNITY IMPACT

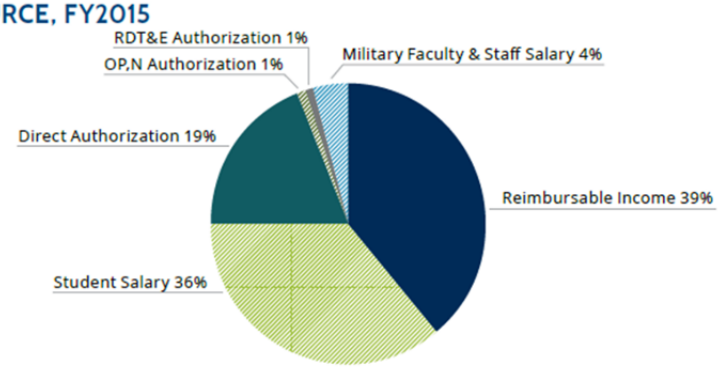
BUDGET BY SOURCE, FY2014



BUDGET ITEM	$ ALLOCATED (IN MILLIONS)
Reimbursable Income	$181.9
Student Salary	$176.4
Direct Authorization	$88.2
RDT&E Authorization	$7.0
Military Faculty & Staff Salary	$16.0
TOTAL	**$469.5**

TOTAL OPERATIONS & MILITARY SALARY

BUDGET BY SOURCE, FY2015



BUDGET ITEM	$ ALLOCATED (IN MILLIONS)
Reimbursable Income	$173
Student Salary	$160
Direct Authorization	$88
OP,N Authorization	$6
RDT&E Authorization	$4
Military Faculty & Staff Salary	$18
TOTAL	**$450**

Figure 1. NPS 2014 and 2015 Funding Sources. Source: Naval Postgraduate School Office of Institutional Research, Reporting and Analysis (IRRA) (2014, 2015a)

D. PROJECT OBJECTIVE: DESCRIBE THE EXISTING (AS-IS) GSBPP APPROACH TO FACILITATING STUDENT PROJECTS AND THESES

The objective of this project—to describe the existing GSBPP approach to facilitating student projects and theses—is distinct from its purpose. The purpose, as stated earlier, is to serve as a jumping-off point for GSBPP's continuous process improvement efforts. Continuous improvement is important to GSBPP—it helps GSBPP to obtain research funding, attain distinguished accreditations, and accomplish many of its other far-term and near-term objectives. While this report draws heavily upon LSS literature to describe the existing GSBPP approach, it will not venture to meticulously apply LSS methodologies or principles to any GSBPP business process.

1. Research Questions

To achieve our project objective, the team will address the following research questions.

- What is the perceived value of the thesis (project) to faculty advisors and students in terms of learning and satisfaction?
- What are the current thesis (project) processes? To what degree do these processes vary across faculty advisors and students?
- What are the current outcomes in terms of the thesis (project) content? To what degree does content vary across faculty advisors and students?

2. Data Collection Sources

The CI Handbook discusses two general categories for data collection: reactive data and proactive data sources. Currently existing data qualify as reactive data, whereas, proactive data does not currently exist and requires effort to produce. The handbook suggests that project teams begin their research by first examining reactive data sources; thereafter, project teams should fill in information gaps by producing proactive data (Aartsengel & Kurtoglu, 2013b, pp. 80; 125). The project team elected to follow the CI Handbook's suggested strategy.

a. Reactive Data Sources

GSBPP exit surveys, archived GSBPP projects, and GSBPP faculty advisement data each provided reactive (i.e., currently existing) sources from which the project team sourced V.O.C., V.O.P., and V.O.B. data sufficient to describe the existing GSBPP approach to facilitating student theses and projects in rudimentary terms.

b. Proactive Data Sources

The project team employed faculty interviews and a new student survey in order to describe the GSBPP approach to facilitating student projects and theses in terms that are more explicit.

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II. BACKGROUND

A. THESIS REQUIREMENT AT PEER AND ASPIRANT BUSINESS SCHOOLS

As a condition for AACSB accreditation, GSBPP maintains a list of comparable peers and aspirant groups for benchmarking purposes. Comparable peers are schools that have a similar mission to GSBPP, and that GSBPP considers appropriate for performance comparisons. Aspirant schools are those that provide developmental goals for GSBPP, representing management education programs and features that GSBPP hopes to emulate, and that provide a context for GSBPP's vision and strategy (AACSB, 2016).

Given GSBPP's connection to its peer and aspirant affiliates, it is appropriate to understand how each treats the thesis requirement. As with any business enterprise, GSBPP has an obvious interest in knowing what its contemporaries are doing. It is not the intent of the project team to infer that either positive or negative connotations exist where variations in thesis treatment are noted between GSBPP and its affiliates.

In order to determine the thesis (or equivalent) requirements at each peer and aspirant business school, the project team sent requests for information (RFIs) to each school via electronic mail. The project team reviewed the RFI responses (see Appendix A) and conducted open source research on the World Wide Web. Our findings indicated that no peer or aspirant school has a formal thesis requirement as a condition to earning a MBA degree (see Table 1). However, 10 of 14 schools have requirements that might be considered equivalent to a thesis, and these generally involved some combination of capstone courses and practical work experiences with private sector clients.

Table 1. GSBPP Peer and Aspirant Business Schools

School	Designation	Thesis (or Equivalent) Requirement(s)
Old Dominion University	Peer	Capstone requirement: Strategic Management (MGMT 621)
Rensselaer Polytechnic Institute	Peer	Practicum in Management (MGMT 6840): project conducted with a company in the students concentration (3-6 credit hours)
Thunderbird School of Global Management	Peer	Thunderbird Experiential Practicum (TGM 596): client facing practicum desired to challenge the knowledge of functional business skills acquired over the course of the program (5 credit hours)
United States Air Force Academy	Peer	N/A, no graduate program
Vanderbilt University	Peer	No thesis or capstone requirements
Wayne State University	Peer	Strategic Management (BA 7080)
Willamette University	Peer	IMAP (Integrative Management Project) Capstone Course
College of William and Mary	Peer	Capstone course required. Global Competitive Strategy; Field Consultancy
St. Joseph's University	Peer	Cross Functional Capstone Course (3 credit hours): Global Business Strategy Simulation(MGT 789); Global Business Strategy(MGT795)
University of California – Irvine	Aspirant	No thesis or capstone requirements
University of California – Davis	Aspirant	Capstone required. Work on a team project for companies ranging from Fortune 500 firms to ultra-fast-paced Silicon Valley start-ups (10 weeks)
Dartmouth College	Aspirant	First-year project course: under the guidance of a faculty advisor, students develop practical business skills working with clients that range from early-stage start-ups to non-profits to global industry leaders.
University of Virginia (Darden)	Aspirant	No thesis or capstone requirements
University of Rochester	Aspirant	Two quarter long consulting project; five MBA students partner to provide consulting services for real issues faced by a corporation

B. PROCESS IMPROVEMENT FRAMEWORK: THE PLAN-DO-STUDY-ACT (PDSA) MODEL

According to Aartsengel and Kurtoglu (2013b), "the PDSA model for improvement is intended to drive all process improvement projects through its Plan-Do-Study-Act (PDSA) Cycle," illustrated in Figure 2 (p. 28). From a project management perspective, the PDSA model is a framework for the application of knowledge, skills, tools and techniques for "process improvement" teams to meet their "process improvement" project requirements (Aartsengel & Kurtoglu, 2013b, pp. 28–29). In other words, the PDSA model provides the "how-to" guide for leading project teams through the process improvement steps. However, for the purposes of this report, the project team will only proceed through the Plan, Do, and Study phases of the PDSA model. The Act phase (i.e., what the GSBPP ought to do, or should do, about its present approaches to facilitating student projects and theses) is a consideration for GSBPP leadership, faculty and staff.

Planning Phase key tasks include describing the project's purpose, developing research questions, and designing the project plan. These tasks are principally described and executed in Chapters I and III.

The *Do Phase* entails executing the plan, documenting observations, and beginning data analysis. These steps are chiefly performed in Chapter IV of this report.

Finally, during the *Study Phase*, project teams complete data analysis and summarize lessons learned. We carry out these actions in Chapter V.

C. PERFORMANCE MEASURES: VALUE, CONTENT, AND PROCESS

In the co-authored text, *A Guide to Continuous Improvement Transformation: Concepts, Processes, Implementation*, Aartsengel and Kurtoglu discuss the importance of selecting the "right" performance measures: "Within an enterprise business, there is a variety of things on which performance measures that can be defined. But the right performance measures will provide focus and clarity to the management and the remaining employees" (Aartsengel & Kurtoglu, 2013a, p. 72). Aartsengel and Kurtoglu (2013a) also discuss the downfall of focusing only on generic performance measures:

> Defining and developing generic or standard industry-approved performance measures should not be sufficient as these generic performance measures are satisfactory for maintaining the status quo, keeping the enterprise business running, but not for taking the enterprise business to the next stage of maturity and differentiate itself from the competition. In today's highly competitive and increasingly services-oriented marketplace, it is vital that an enterprise business differentiates itself from the competition. (p. 72.)

In an effort to identify the "right" performance measures, the project team will introduce and develop three performance measures in this report: capstone value, capstone content, and capstone process. None of these measures was developed in a vacuum; rather, they emerged naturally as the project team listened to the voices of process, business, and customer. Consequently, we believe that we have identified the correct performance measures, and we will attempt to qualify and quantify *value*, *process*, and *content* in the coming chapters.

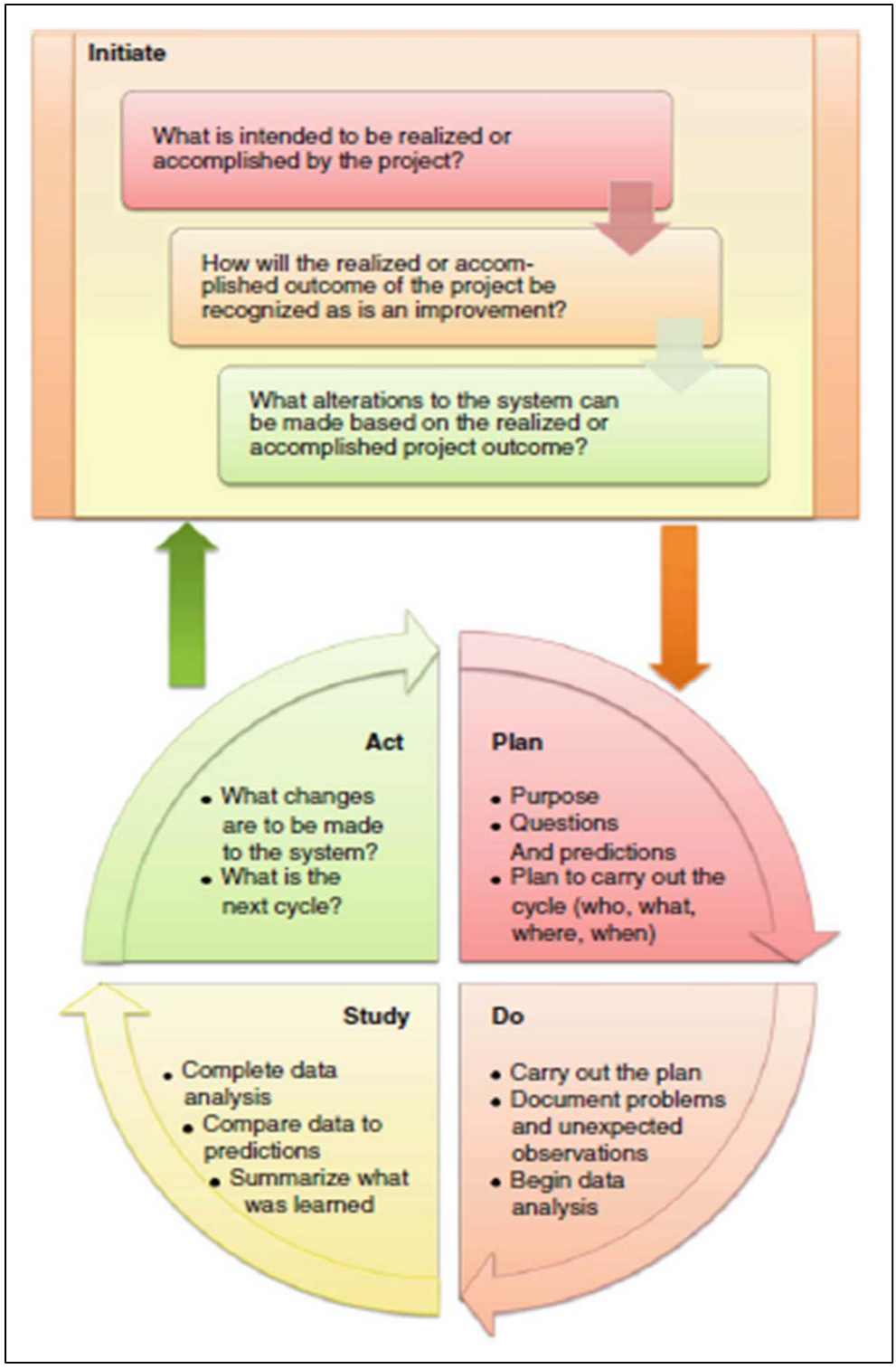

Figure 2. Plan-Do-Study-Act (PDSA) Model for Continuous Process Improvement. Source: Aartsengel & Kurtoglu (2013b)

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III. METHOD

A. INTRODUCTION

As presented in Chapter I, the objective of this project is to describe the existing GSBPP approach to facilitating student projects and theses. To achieve our objective, the project team proceeded through three phases in order to accurately define the existing as-is state. The first two phases allowed the project team to gain a rudimentary understanding of the capstone project; the final phase provided us with a fuller understanding of the existing as-is state. For the remainder of this report, the project team will use the term *capstone* interchangeably as a word that is inclusive of both GSBPP projects and GSBPP theses; it does not refer to a course of instruction.

During Phase 1, the project team analyzed observations from a sample of 150 student responses to the GSBPP exit survey (hereafter, exit survey). In Phase 2, we analyzed detailed observations from a sample of 74 published GSBPP projects and theses (hereafter, archived projects). Also during Phase 2, we analyzed observations from NPS faculty advisement data for more than one thousand advisements performed between 2011 and 2015 (hereafter, advisement data).

Our collective observations from the exit survey, archived projects, and advisement data (Phases 1 and 2) highlighted the basic features of the GSBPP capstone project. These same observations guided our development of faculty interview and student survey questions in Phase 3. During Phase 3, the project team sought to define the capstone's features more precisely by detailing its value, content, and process.

B. PHASE 1: EXIT SURVEYS

Before graduating classes depart, the GSBPP staff attempts to gather student feedback through exit surveys. The exit survey collects feedback as it pertains to specific aspects of the GSBPP program, allowing students to provide their critique on individual courses, Joint Professional Military Education (JPME), intended learning outcomes, and other program elements. The project team obtained three years of exit survey data that

includes 150 total responses from six graduating classes (June ’13, ’14 and ’15; December ’13, ’14 and ’15).

Student responses to the following four exit survey questions had particular relevance to the project team’s study.

1. How would you describe your overall level of satisfaction with your program?

- Very Satisfactory
- Satisfactory
- Neither Satisfactory Nor Unsatisfactory
- Unsatisfactory
- Very Unsatisfactory

2. Overall, I would rate the MBA Project (or Thesis) experience as…

- Outstanding
- Very Good
- Fair
- Poor

3. Overall, I would rate the support from my MBA thesis/project advisors as…

- Outstanding
- Very Good
- Fair
- Poor

4. Make any comments you wish concerning your experience with and/or suggestions concerning the MBA Project (or Thesis).

1. Analysis Approach

The project team analyzed trends in favorability for the first three questions presented in the preceding section. The first question—which pertains to the student’s

overall level of satisfaction with his or her GSBPP program—served as a benchmark for evaluating the second question, which specifically targets the student's level of satisfaction with the capstone itself. The third question asks students to assess the level of support each received from their capstone advisors.

The project team performed a thematic analysis of student responses to the fourth and final question, which asks students to comment on their MBA project or thesis experience (see Appendix B). Our review of all comments revealed that only 79 of the 150 entries were substantial and relevant to our study. We dismissed the remaining 71 entries for one or more of the following reasons.

1. The survey entry is blank.
2. The respondent chose to respond with "no comment" or words to that effect.
3. The survey entry is outside of GSBPP's direct purview to address (e.g., comments about the Thesis Processing Office; comments about group dynamics within the project team).
4. The survey entry is not relevant to the MBA project or thesis (e.g., comments about GSBPP academic courses).
5. The survey entry is too brief to discern its meaning (e.g., comments such as "very time consuming," "great program," and "went just fine").
6. The survey entry is too particular to ascertain broad generalizations about the holistic MBA project or thesis experience (e.g., comments about specific advisors or about specific topics).

After dismissing the immaterial comments, the project team investigated each relevant comment to identify generalizable themes that might apply holistically to the typical GSBPP student. Our analysis identified three themes (or performance measures) that resonated throughout the bulk of student responses: capstone value, capstone content, and capstone process.

2. Voice of the Customer

The GSBPP exit survey helped the project team to satisfy the voice of the customer (V.O.C.) data collection requirements for applying the Plan-Do-Study-Act (PDSA) model for continuous process improvement. Survey responses provided sufficient and accurate information about the students' requirements, expectations, and experiences related to the GSBPP capstone. The exit survey comments provided

qualitative V.O.C. data about customer needs as described through the students' own words and narrative statements, which the project team grouped together by highlighting key words and extracting themes (Aartsengel & Kurtoglu, 2013b, p. 77).

C. PHASE 2A: GSBPP ARCHIVED PROJECTS

Archived projects helped to define the GSBPP capstone's existing as-is state by describing the typical output (or content) contained within published reports. NPS publishes unclassified reports on Dudley Knox Library's public website (library.nps.edu/web/library/nps-theses). The project team reviewed a sample of seventy-four GSBPP projects from 2014: 23 are from March, two are from June, and 49 are from December 2014. The project team selected this sample because it included many of the most recent capstones available for public viewing on the NPS website (at the time of the project team's study).

The project team also selected our sample size (74) in order to achieve a desired 90 percent level of confidence that the point estimate represents the population parameter. At the time of the project team's study, there were 547 GSBPP capstones archived in the NPS repository (see Figure 3). The sample size selected achieves a ± 8.9 percent margin of error that the sample estimate represents the total population of GSBPP capstones. The project team is comfortable with our selected confidence interval given that many researchers typically use confidence levels that range from 80 to 99 percent (Rumsey, 2016). Using free statistical calculations available on the World Wide Web, we determined that 74 capstones is an appropriate sample size (see Figure 4).

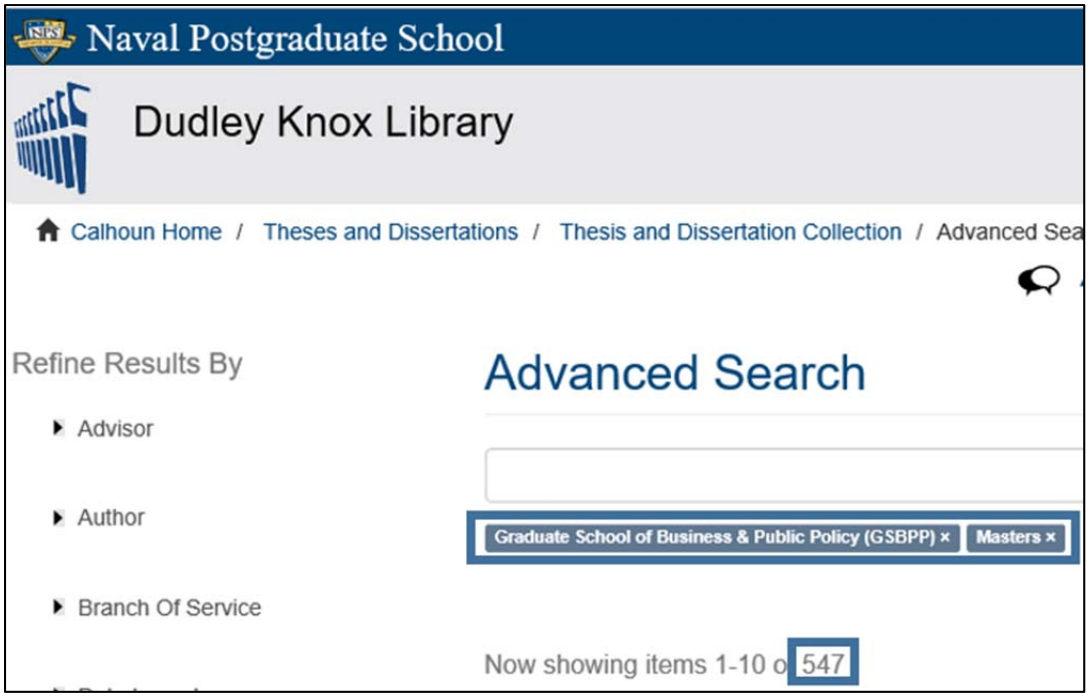


Figure 3. Total Number of GSBPP Capstones (547). Source: Naval Postgraduate School Dudley Knox Library (2016)

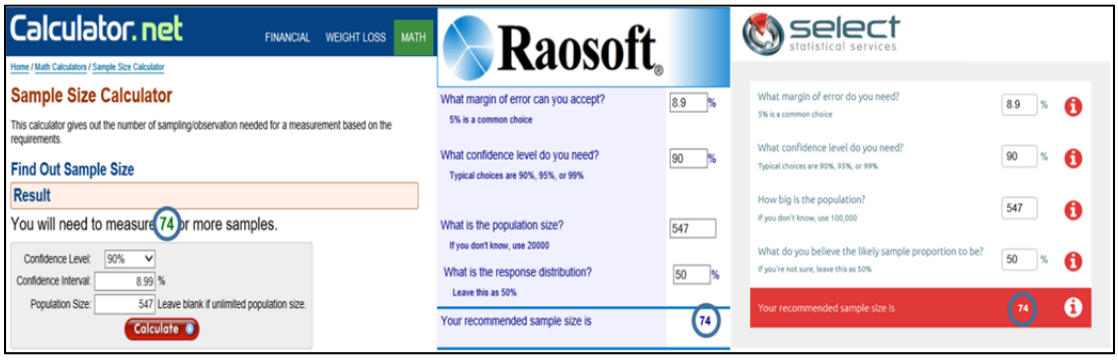


Figure 4. Capstone Sample Size Determination (74 Reports). Source: Calculator.net (2016); Raosoft (2016); Select Statistical Services (2016)

1. Analysis Approach

An archived project is similar to a "finished product" that reveals its creation process during product disassembly. Just as manufacturers can learn how to fabricate complex items through reverse engineering, so too did the project team gain insight into how GSBPP capstones are produced by reducing each archived project into its basic

elements. We recorded the common features of archived projects such as the report type, sponsorship status, content elements, and descriptive statistics to identify and document content trends within the collective sample.

2. Voice of the Process

The archived projects helped the project team to satisfy the voice of the process (V.O.P.) data collection requirements for applying the PDSA model. Common capstone features describe the capstone process in explicit and implicit terms. Explicitly, content elements describe the process's output in the form of finished theses and projects. Implicitly, content elements give inference to the inputs required to produce GSBPP capstones—the number of authors, advisors, and pages needed to produce a typical GSBPP capstone report, for instance. Output (Content) elements provided qualitative V.O.P. data that the project team also summarized by means of counts in order to produce quantitative V.O.P (Aartsengel & Kurtoglu, 2013b, p. 205).

D. PHASE 2B: FACULTY ADVISEMENT DATA

Faculty advisement data is recorded in Python, the web-based education management system that NPS uses to automate and streamline many education management processes. NPS students enter thesis information into Python including advisor names (Naval Postgraduate School, 2009, p. 35). The project team obtained a Python-generated record showing that 1,115 advisements on GSBPP capstones occurred between 2011 and 2015 (see Table 2). "Total advisements" is distinct from "total capstones" because this record does not show if one or more faculty advisors teamed together on any particular capstone, even though project teaming occurs quite often. The record does distinguish between the number of capstone advisors that are full-time GSBPP employees (81), part-time GSBPP employees (18), and employees that are external to GSBPP (62).

Table 2. Total GSBPP Capstone Advisements between 2011 and 2015

Year	Total Advisements
2011	185
2012	235
2013	219
2014	240
2015	236
Grand Total	**1,115**

1. Analysis Approach

The project team looked for workload distribution trends by comparing average outputs for GSBPP full-time faculty members over time. The project team limited our analysis to full-time faculty members since this population is the focus of the GSBPP's process improvement efforts. Additionally, the project team noted workload distribution trends by advisor type (i.e., full-time GSBPP faculty, part-time GSBPP faculty, and external (non-GSBPP) faculty types).

The greatest challenge encountered when determining the average output for full-time faculty members concerned "breaks" in advising over time. For example, if Advisor X has advisement data entered for 2012, 2013, and 2015 (say, 4, 7, and 4, respectively), but no data is captured for 2011 or 2014 (i.e., the cells are "blank"), does Advisor X's average output equal 5.0 advisements per year (= (4 + 7 + 4) ÷ 3)? Should it instead equal 3.0 advisements per year for the entire five-year period (= (0 + 4 + 7 + 0 + 4) ÷ 5)? If NPS did not hire Advisor X until 2012, should his average advisements equal 3.75 for the four-year employment period (= (4 + 7 + 0 + 4) ÷ 4)?

In order to determine the appropriate denominator for each GSBPP full-time faculty member, the project team performed the following steps.

1. With the assistance of our project advisors and the Office of the GSBPP Dean, we confirmed that each faculty member contained in our sample was employed by GSBPP in 2015—the latest year for our sample. We

entered a "0" into Microsoft Excel ® if cells were otherwise blank for each faculty member in 2015.

2. We obtained hiring years for most full-time GSBPP faculty members contained in the sample. In instances where the hiring year was not made available, the project team omitted the faculty member from our sample. This action reduced the sample size for full-time GSBPP faculty employees from 81 to 56 (25 total).
3. The project team computed average outputs that are inclusive of the entire hiring period for each faculty member (i.e., 20XX – 2015). Faculty members were not "penalized" for not advising projects during years when they were not employed by GSBPP, and we left the Microsoft Excel ® cells "blank" when calculating their averages. However, averages were adjusted (lowered) when breaks in advising occurred after the faculty member was already employed by GSBPP, and we entered a "0" into the otherwise blank cells when calculating their averages. The project team did not attempt to account for reasons why breaks in advising may have occurred, such as authorized sabbaticals, maternity leaves, illnesses, or other excused absences for individual GSBPP faculty members.

2. Voice of the Business

Advisement data helped the project team to satisfy the voice of the business (V.O.B.) data collection requirements for applying the PDSA model. V.O.B. communicates the business's return on investment (ROI) and the advisement data helped to identify GSBPP's ROI expressed as the average number of projects advised per full-time employee on-hand. V.O.B. also provides indicators regarding the business's sustainability and its ability to meet employee needs (Aartsengel & Kurtoglu, 2013b, p. 69). Faculty advisement data gave insight into the sustainability of the current workload allocation for GSBPP capstones, and indicated whether such an allocation is likely to satisfy the needs of GSBPP employees, such as the need to perceive fairness in workload distribution. Advisement data provided quantitative V.O.B.

E. PHASE 3: INTERVIEW AND SURVEY DESIGN

Applying the PDSA model for continuous process improvement involves data collection from three important sources: the voice of the customer (V.O.C.), the voice of the process (V.O.P.), and the voice of the business (V.O.B.). The *CI Handbook* proposes that project teams begin their research by first examining reactive data sources; thereafter, project teams should fill in information gaps by using proactive approaches

(Aartsengel & Kurtoglu, 2013b, p. 125). According to Aartsengel and Kurtoglu, "Proactive sources include, but are not limited to, interviews…and surveys" (Aartsengel & Kurtoglu, 2013b, p. 80).

The GSBPP exit surveys, archived projects, and advisement data each provided reactive sources for sourcing V.O.C., V.O.P., and V.O.B. data sufficient to explain the existing GSBPP capstone in basic terms. The project team determined that it needed to employ faculty interviews and student surveys if it wished to define the capstone's features more exactly. The exit survey, archived projects, and advisement data also introduced themes related to the capstone's value, content, and process. The project team decided to develop these themes further within the interview and survey designs.

1. Interview Sample Size and Demographics

The project team developed a linear programming (LP) model (see Appendix C) in order to determine the minimum number of faculty interviews needed to gather a wide range of perspectives on the capstone's value, content, and processes. The model generated twelve interviewees with various characteristics (see Table 3 for the *desired* interview sample demographics).

The project team requested to interview each faculty member generated by the LP model. Some faculty members accepted the project team's invitation to interview while others declined. Ultimately, the project team conducted interviews with 11 full-time GSBPP faculty members with various characteristics (*actual* interview sample demographics are shown in Table 4).

Table 3. Desired Interview Sample Size and Demographics

Advisement Data	**No.**
Average annual advisements greater than μ (2.799 projects per year)	6
Average annual advisements less than μ (2.799 projects per year)	6
Academic Area	
Acquisition Management	2
Financial Management	3
Management	3
Manpower and Economics	2
Operations and Logistics	2
Title	
Assistant Professor	2
Associate Professor	3
Lecturer	2
Professor	2
Senior Lecturer	3
Tenure Status	
Non-Tenure Track	6
Tenured, Tenure-Track	4
Untenured, Tenure-Track	2
TOTAL INTERVIEWEES	**12**

2. Interview Questions

The project team developed 13 interview questions about the capstone's value, content, and processes (see Appendix D). Although interviewees received the questions in advance of the interview, interviewees were not privy to the theme associated with each question.

Value Questions:	3
Content Questions:	2
Process Questions:	8
TOTAL INTERVIEW QUESTIONS	13

3. Interview Analysis Approach

The project team reviewed and summarized key findings from audio recordings and handwritten notes collected during faculty interviews. The interviews provided qualitative V.O.B. as described through the faculty members' own words and narrative statements, which the project team grouped together by highlighting key words and identifying themes. A presentation of our findings from the faculty interviews is found in Chapter IV.

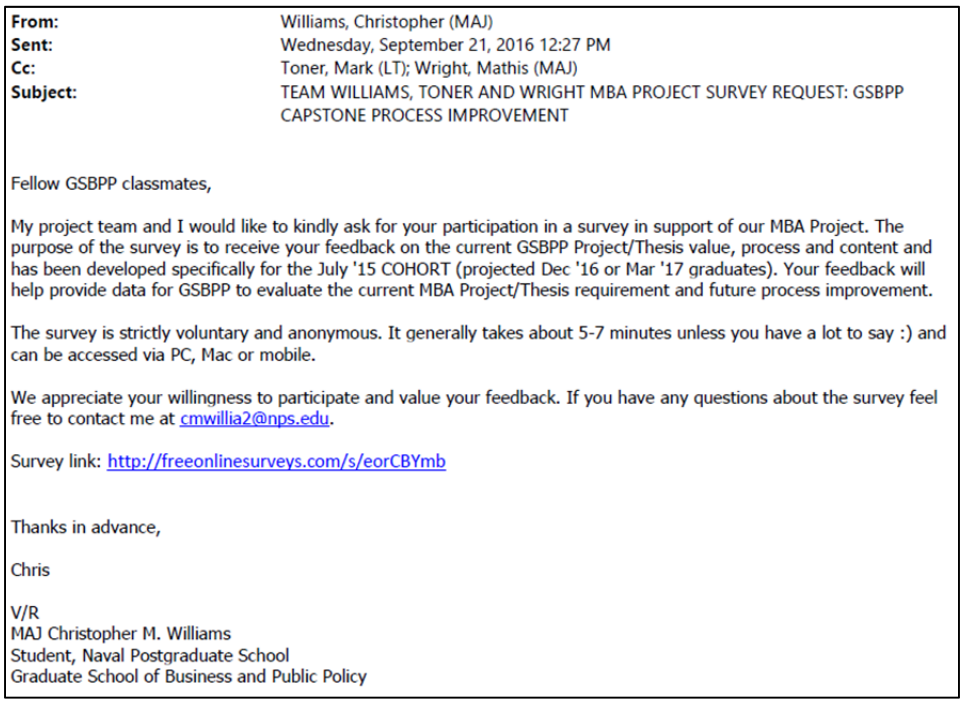
Table 4. Actual Interview Sample Size and Demographics

Advisement Data	**No.**
Average annual advisements greater than μ (2.799 projects per year)	4
Average annual advisements less than μ (2.799 projects per year)	7
Academic Area	
Acquisition Management	3
Financial Management	5
Management	2
Manpower and Economics	0
Operations and Logistics	1
Title	
Assistant Professor	1
Associate Professor	2
Lecturer	3
Professor	3
Senior Lecturer	2
Tenure Status	
Non-Tenure Track	6
Tenured, Tenure-Track	5
Untenured, Tenure-Track	0
TOTAL INTERVIEWEES	**11**

4. Survey Population Size and Demographics

The project team distributed the survey electronically to 119 GSBPP students in their sixth academic quarter, which represents the entire GSBPP student population beginning their studies at NPS in the fourth quarter of fiscal year 2015 (minus the three authors of this report). The project team selected this population after determining that sixth-quarter students represented the population most capable of providing

comprehensive feedback on the holistic capstone experience from start to finish. The project team also anticipated receiving a high response rate (30–40 percent or better) because of our established rapport with the target population. Students were invited to participate in the survey via electronic mail request (see Figure 5). The demographic makeup of the survey population is provided in Table 5.



From: Williams, Christopher (MAJ)
Sent: Wednesday, September 21, 2016 12:27 PM
Cc: Toner, Mark (LT); Wright, Mathis (MAJ)
Subject: TEAM WILLIAMS, TONER AND WRIGHT MBA PROJECT SURVEY REQUEST: GSBPP CAPSTONE PROCESS IMPROVEMENT

Fellow GSBPP classmates,

My project team and I would like to kindly ask for your participation in a survey in support of our MBA Project. The purpose of the survey is to receive your feedback on the current GSBPP Project/Thesis value, process and content and has been developed specifically for the July '15 COHORT (projected Dec '16 or Mar '17 graduates). Your feedback will help provide data for GSBPP to evaluate the current MBA Project/Thesis requirement and future process improvement.

The survey is strictly voluntary and anonymous. It generally takes about 5-7 minutes unless you have a lot to say :) and can be accessed via PC, Mac or mobile.

We appreciate your willingness to participate and value your feedback. If you have any questions about the survey feel free to contact me at cmwillia2@nps.edu.

Survey link: http://freeonlinesurveys.com/s/eorCBYmb

Thanks in advance,

Chris

V/R
MAJ Christopher M. Williams
Student, Naval Postgraduate School
Graduate School of Business and Public Policy

Figure 5. Survey Participation Request

Table 5. Survey Population Size and Demographics

Academic Area	Curriculum	No.
Acquisition Management	(815, 816)	33
Defense Management	(818, 820)	5
Defense Systems Analysis	(817)	9
Financial Management	(837)	24
Financial Management (Energy)	(838)	3
Information Management	(870)	5
Logistics Management	(819, 827)	14
Manpower Systems	(847)	26
TOTAL POPULATION		**119**

5. Survey Sample Size and Demographics

Sixty-seven of 119 students responded to the survey for a response rate of 56.3 percent. The demographic makeup of the survey sample is provided in Table 6.

Table 6. Survey Sample Size and Demographics

Academic Area	Curriculum	No.
Acquisition Management	(815, 816)	21
Defense Management	(818, 820)	2
Defense Systems Analysis	(817)	7
Financial Management	(837)	11
Financial Management (Energy)	(838)	3
Information Management	(870)	1
Logistics Management	(819, 827)	8
Manpower Systems	(847)	14
TOTAL SAMPLE		**67**

6. Survey Questions

The project team developed 20 survey questions about the capstone's value, content, and processes (see Appendix E).

Value Questions:	5
Content Questions:	2
Process Questions:	13
TOTAL SURVEY QUESTIONS	20

7. Survey Analysis Approach

The project team performed a descriptive analysis of survey responses. The survey responses provided both qualitative and quantitative V.O.C. that the project team used to build a factual representation of the existing GSBPP approach to facilitating student capstones. A full presentation of our findings and analysis regarding the student survey is provided in Chapter IV.

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IV. ANALYSIS AND FINDINGS

A. PHASE 1: EXIT SURVEY

As noted in Chapter III, the GSBPP exit survey helped the project team to satisfy the voice of the customer (V.O.C.) data collection requirements for applying the Plan-Do-Study-Act (PDSA) model for continuous process improvement. The project team analyzed observations from a sample of 150 student responses to the exit survey in order to understand and capture the students' stated and unstated needs, wants, and desires with respect to the GSBPP capstone. Responses to four exit survey questions, in particular, shed light on the students' requirements for the capstone.

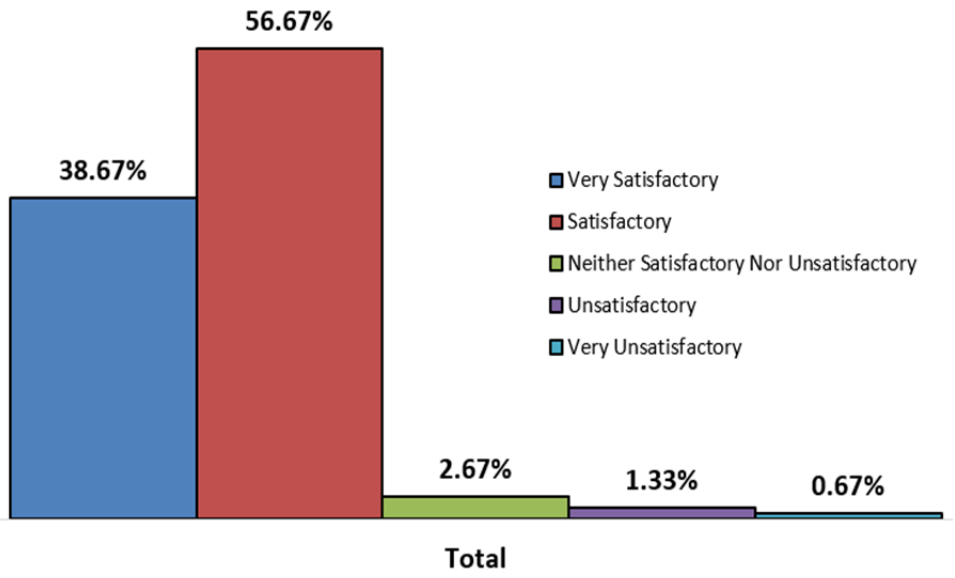
1. Student Overall Satisfaction with their GSBPP Program, 2013–2015

An exit survey question asked students to rate their degree of satisfaction with their particular GSBPP program (e.g., acquisition management, defense systems analysis, financial management, etc.) using a five-point Likert scale with ordered responses as follows.

How would you describe your overall level of satisfaction with your program?

- Very Satisfactory
- Satisfactory
- Neither Satisfactory Nor Unsatisfactory
- Unsatisfactory
- Very Unsatisfactory

Over 95 percent of respondents replied with either *very satisfactory* (38.67 percent) or *satisfactory* (56.67 percent), indicating that GSBPP students had a *mostly favorable* view of their academic programs (see Figure 6). Moreover, favorability has remained above 90 percent since 2013 (see Table 7, Row 6).



Exit survey question No. 4 asked students the following question: How would you describe your overall level of satisfaction with your program?

Figure 6. Exit Survey Question No. 4

Table 7. Academic Program Level of Satisfaction 2013–2015

		2013	2014	2015	**Total**
Row 2	Total Respondents	49	60	41	**150**
Row 3	Count "Very Satisfactory"	20	21	17	**58**
Row 4	Count "Satisfactory"	28	34	23	**85**
Row 5	Count "Favorable" *(Row 3 + Row 4)*	48	55	40	**143**
Row 6	Percent Favorable *(Row 5 ÷ Row 2)*	97.96%	91.67%	97.56%	**95.34%**
Row 7	Delta		- 6.29%	+ 5.89%	

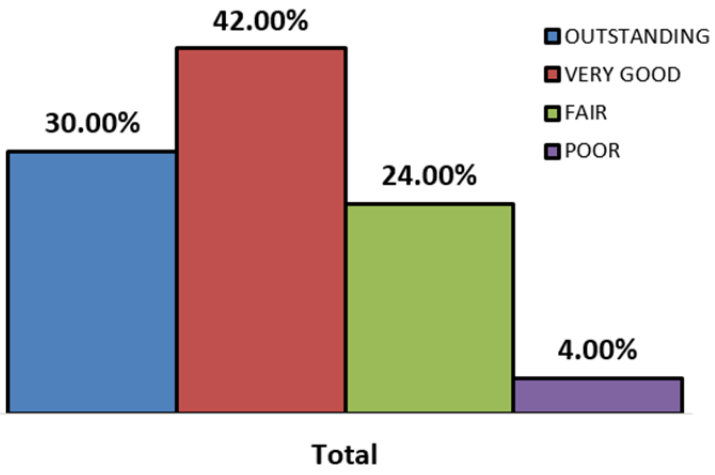
2. Student Satisfaction with Their GSBPP Capstone, 2013—2015

Another exit survey question asked students to rate their degree of satisfaction with the capstone experience using a four-leveled Likert scale with ordered responses.

Overall, I would rate the MBA Project (or Thesis) experience as…

- Outstanding
- Very Good
- Fair
- Poor

Seventy-two percent of respondents replied with either *outstanding* (30 percent) or *very good* (42 percent), indicating that GSBPP students had a *somewhat favorable* view of the GSBPP capstone (see Figure 7). Moreover, survey results show a downward trend in favorability from 81.63 percent in 2013 to 65.85 percent in 2015 (see Table 8, Rows 6 and 7).



Exit survey question No. 9 asked students the following question: Overall, I would rate the MBA project (or Thesis) experience as?

Figure 7. Exit Survey Question No. 9

Table 8. MBA Project/Thesis Experience Favorability 2013–2015

		2013	2014	2015	**Total**
Row 2	Total Respondents	49	60	41	**150**
Row 3	Count "Outstanding"	19	16	10	**58**
Row 4	Count "Very Good"	21	25	17	**85**
Row 5	Count "Favorable" *(Row 3 + Row 4)*	40	41	27	**108**
Row 6	Percent Favorable *(Row 5 ÷ Row 2)*	81.63%	68.33%	65.85%	**72.00%**
Row 7	Delta		- 13.30%	- 2.48%	

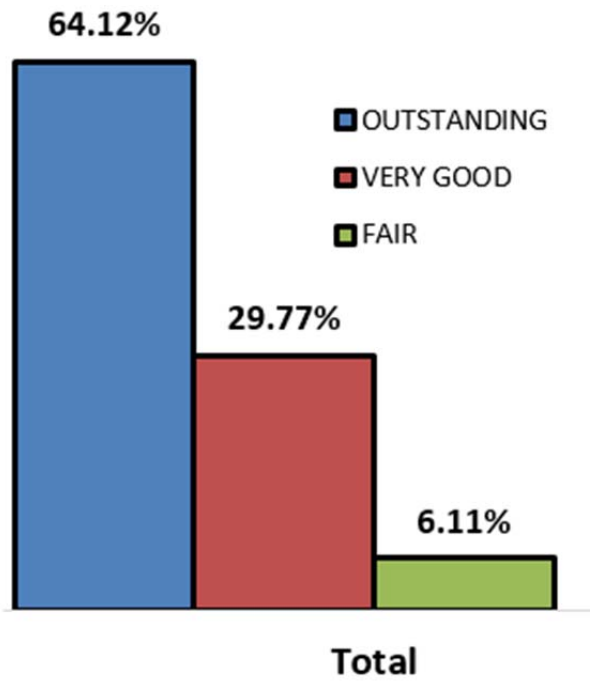
3. Student Satisfaction with their Capstone Advisors, 2013 – 2015

An exit survey question asked students to rate their degree of satisfaction with their capstone advisors, also using a four-point Likert scale with ordered response levels.

Overall, I would rate the support from my MBA thesis/project advisors as…

- Outstanding
- Very Good
- Fair
- Poor

Nearly 94 percent of respondents replied with either *outstanding* (64.12 percent) or *very good* (29.77 percent), indicating that GSBPP students had a *mostly favorable* view of their capstone advisors (see Figure 8). Survey results do show wide variations in favorability from one year to the following year (see Table 9, Rows 6 and 7).



Exit question No. 14 asked students the following question: Overall, I would rate the support from my MBA thesis/project advisors as?

Figure 8. Exit Survey Question No. 14

Table 9. MBA Project/Thesis Advisor Favorability 2013–2015

		2013	2014	2015	**Total**
Row 2	Total Respondents	39	51	41	**131***
Row 3	Count "Outstanding"	24	33	27	**84**
Row 4	Count "Very Good"	10	18	11	**39**
Row 5	Count "Favorable" *(Row 3 + Row 4)*	34	51	38	**123**
Row 6	Percent Favorable *(Row 5 ÷ Row 2)*	87.18%	100%	92.68%	**93.89%**
Row 7	Delta		+12.82%	- 7.32%	

*Only 131 of 150 student respondents answered this question

4. Student Survey Comments, 2013 –2015

Through the analysis described below, the project team developed the following key definitions.

1. Capstone Value – the degree of intrinsic and extrinsic usefulness, worth, and importance that one derives from the capstone often with consideration given to the degree of value derived from other sources.
2. Capstone Content – the composition, arrangement, and presentation of information within the capstone document.
3. Capstone Process – the series of sequential and concurrent steps, both obligatory and optional, taken by members of the capstone team to produce the capstone document. The capstone team members include, among others, the capstone author(s) and capstone advisor(s).

a. Thematic Analysis of Exit Survey Comments

An exit survey question asked students to comment on their MBA project or thesis experience. The project team performed a thematic analysis of student comments. We highlighted key words and categorized comments by topic to identify themes, shown with examples in Table 10 (see Appendix B for the complete thematic analysis). Our analysis identified three major themes (or performance measures) that resonated throughout the bulk of student responses: capstone value, capstone content, and capstone process.

Each comment also expressed the student's positive, neutral, or negative reaction to the comment's associated theme. If the comment expressed the student's clearly positive reaction to the theme, then the project team assigned a "+" (positive reaction) to the comment. Similarly, the project team assigned a "-" if the student had either a clearly negative reaction to the theme, or if the student recommended corrective actions to rectify some perceived shortcoming. The project team assigned a "N" if the comment was either clearly neutral, or if neutrality resulted from the offsetting of positive and negative reactions communicated through a single response.

Table 10. GSBPP Exit Survey Comments: Thematic Analysis Illustration

Actual Survey Comment	Extracted Theme	Reaction (+,N,-)
What's the difference between an MBA project and a thesis? I'm still trying to figure that out. Was not ever made clear. Recommend GSBPP either go all MBA projects all theses. Unnecessary complication.	Content	-
Why do we do this? If I am not being forced to work on a DOD-sponsored project than why do I have to do a thesis? There is no rational I have heard to justify this requirement other than supporting the needs of the fleet - which isn't even required.	Content	-
More guidance on the process. It felt very much like trial and error as to who needed what signatures and when we needed them as well as how the editing would go. There should be some single flow chart that helps explain the process.	Process	-
The MBA Project process was very good for me. Our advisor faculty members were very encouraging and helpful throughout the process. The thesis processing office also did great work. My biggest challenge was managing controversy and work equity within my MBA Project team.	Process	+
After completing the requirement, I am still uncertain if there was any real value added. In fact, I could argue that the requirement had somewhat forced me to put forth less of an effort in my core MBA courses starting in my 4th quarter. I would prefer additional classes added to the curriculum rather than the MBA Thesis/Project requirement. I feel the additional classes would provide more benefit than the thesis requirement.	Value	-
The MBA Thesis allowed me to contemplate the skills I gained, find an area of interest to study, and apply my new tools on a project. The MBA Thesis added value to my education.	Value	+

The project team investigated 79 survey comments and categorized five as content-related comments, 34 as value-related, and 40 as process-related comments (see Table 11). These general categories, however, do not supplant the reality that many comments did, in fact, espouse multiple themes. For simplicity, the project team narrowed our analysis and matched each comment to the single theme it most exemplified.

Table 11. Exit Survey Comments Summary

Reaction	Content	Process	Value
Positive (+)	1	3	23
Neutral (N)	1	6	0
Negative (-)	3	31	11
Total	**5**	**40**	**34**

5. Findings

The GSBPP exit survey provided a reactive source for pulling V.O.C. data from student respondents. The students' stated requirements for the GSBPP capstone include the need to understand its value, processes, and content. Recently, GSBPP students had a *mostly favorable* view of their academic programs and capstone advisors (95.34 percent and 93.89 percent, respectively), but the same pool of respondents had an only *somewhat favorable* view of the capstone itself (72 percent). This finding suggests that although GSBPP has largely satisfied the need to provide students with a quality education and advisement support, GSBPP has performed less admirably in satisfying the student's need to understand the capstone's value, processes and content.

Regarding capstone value, Table 11 shows that more than twice as many students derived positive value from the capstone (68 percent, or 23 of 34 comments on value) as derived negative value from the capstone (32 percent, or 11 of 34 comments on value). However, students experienced negative overall reactions to capstone processes (78 percent, or 31 of 40 comments on process) and capstone content (60 percent, or 3 of 5 comments on content). The volume of *process* comments (40 total) in relation to the *value* and *content* categories (34 and 5 comments, respectively) suggests that capstone processes are perhaps the students' most important measure of GSBPP performance followed by capstone value and finally, capstone content.

Later in Chapter IV, the project team will describe the capstone's content, processes, and value in more detail through the use of a new student survey and GSBPP faculty interviews.

B. PHASE 2A: GSBPP ARCHIVED PROJECTS

GSBPP archived projects provided voice of the process (V.O.P.) data for applying the PDSA model. The project team was able to describe the process's inputs by reviewing content elements within archived projects (e.g., the number of authors, advisors, and pages that are needed, etc.) and the output (i.e., published capstone reports) involved during the creation of GSBPP projects and theses. In order to gain a better understanding of the process, the project team reviewed a sample of 74 archived capstones and identified key components. We recorded common features such as the capstone's type, funding and sponsorship status, and generated descriptive statistics in order to identify and document content trends throughout the collective sample.

1. Capstone Distribution by Capstone Type

GSBPP capstones consist of three types: the MBA professional report, the Master's thesis, and the joint applied project (see Figure 9). Although the three capstone types are substantively identical in both structure and execution, certain nuances do exist. For instance, most resident GSBPP students have the option to perform either the MBA professional report or the master's thesis, but some GSBPP curriculums (like 817, Defense Systems Analysis) only allow the thesis option. All non-resident (i.e., Distance Learning) GSBPP students must perform the joint applied project, which is not an option available to resident GSBPP students.

Because the structure and execution of each type is essentially the same, the project team did not attempt to identify and analyze variations in capstone content relative to the capstone's type. However, the project team acknowledges that variations in capstone processes or derived capstone value could exist relative to the capstone's type. We propose this area for future research later in Chapter V.

Capstone Type	
MBA Professional Report	34
Master's Thesis	34
Joint Applied Project	6
Total	**74**

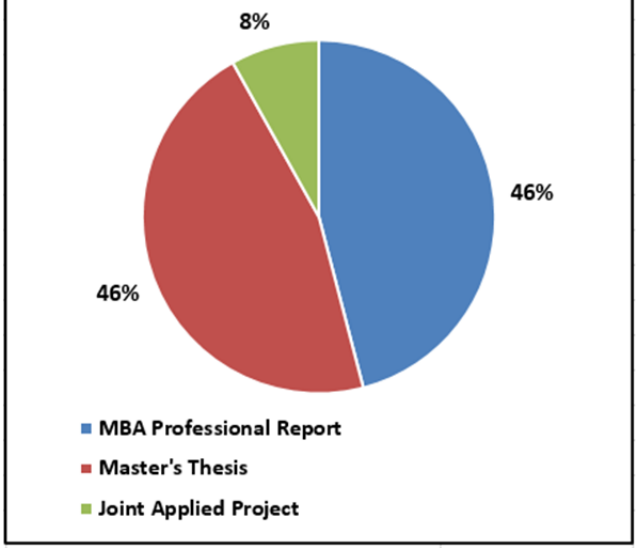


Figure 9. Capstone Distribution by Capstone Type

2. Capstone Distribution by Funding and Sponsorship

Capstone funding and sponsorship statuses are recorded on the Standard Form (SF) 298, Report Documentation Page. The SF 298 accompanies each capstone as an official record and is usually found on page *i* of the published capstone report. The project team recorded funding and sponsorship statuses for each capstone contained in our sample. According to our findings, U.S. Department of Defense (DOD) agencies sponsored 12 of 74 capstones (16 percent) while funding two of 74 capstones (three percent). See Figure 10.

Capstone Funding		Capstone Sponsorship	
Funded	2	Sponsored	12
Unfunded	72	Not Sponsored	62
Total	**74**	**Total**	**74**

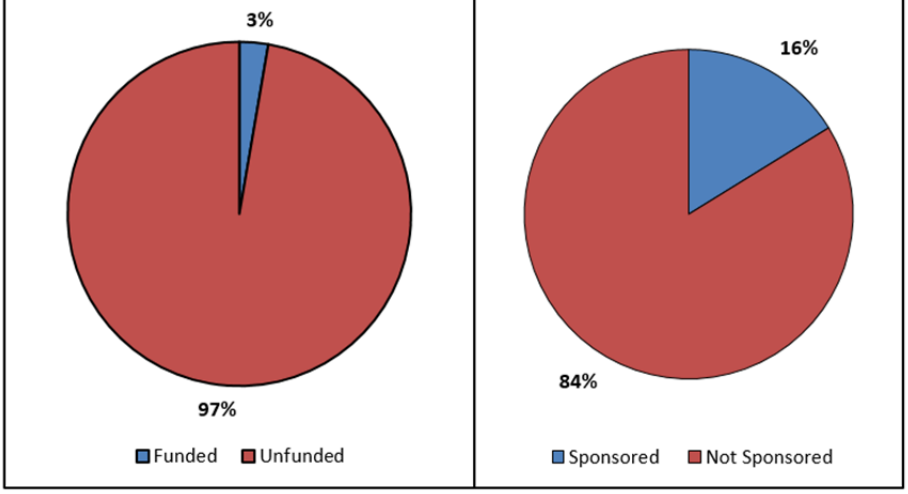


Figure 10. Capstone Distribution by Funding and Sponsorship

3. Number of Authors, Advisors, Chapters, and Appendices per Capstone

The project team recorded the number of authors, advisors, chapters, and appendices for each capstone and concluded that the typical GSBPP student from our sample opted to work alone (54 percent), select two capstone advisors (89 percent), author five capstone chapters (57 percent) and create very few appendices, if any (see Figure 11).

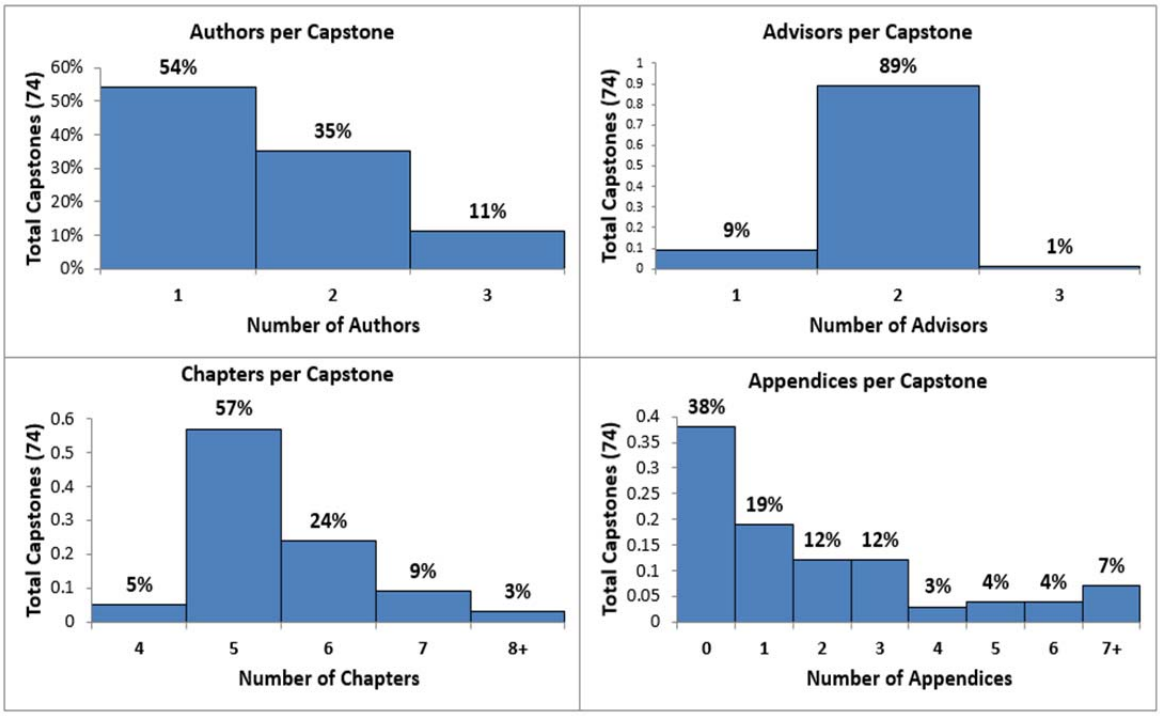


Figure 11. Number of Authors, Advisors, Chapters, and Appendices per Capstone (74 Total)

4. Number of Pages per Capstone

Table 12 presents descriptive statistics for the number of pages per capstone. The typical capstone from our sample contained 102 ± 9.8 pages with 95 percent confidence. There is a considerable range in page count between the lowest count (39 pages) and the highest count (319 pages). The page count is a cover-to-cover count that includes cover pages, title pages, blank pages, abstracts, executive summaries, and author acknowledgements, tables of content, appendices, references, and lists of figures, tables and acronyms as applicable.

Table 12. Number of Pages Per Capstone

Mean	102
Median	89
Mode	73
Standard Error	5
Standard Deviation	42
Minimum	39
Maximum	319
Range	280
Count	74

5. Capstone Content Elements

In addition to recording capstone features such as its type and sponsorship status, the project team also perused each capstone for its actual content elements. Figure 12 lists twelve of the most common content elements identified in our sample of 74 capstones. In most instances, the content element was explicitly stated as either a chapter title or subheading title within the table of contents. In other instances, the content element was discovered only through reading a body of text.

The project team must acknowledge that the findings presented in Figure 12 are not conclusive—it is entirely possible that our investigation failed, on some occasions, to properly recognize or categorize a content element. However, even a cursory viewing of Figure 12 reveals that GSBPP capstones have some general similarities and differences.

Similarities. More than half of the capstones had an introduction (100%), conclusion (100%), methodology (81%), recommendations (81%), background (76%), literature review (76%), recommendations for future research (64%), and analysis sections (61%).

Differences. Less than half of the capstones had interviews (12%), surveys (14%), a problem statement (18%), or scope (41%).

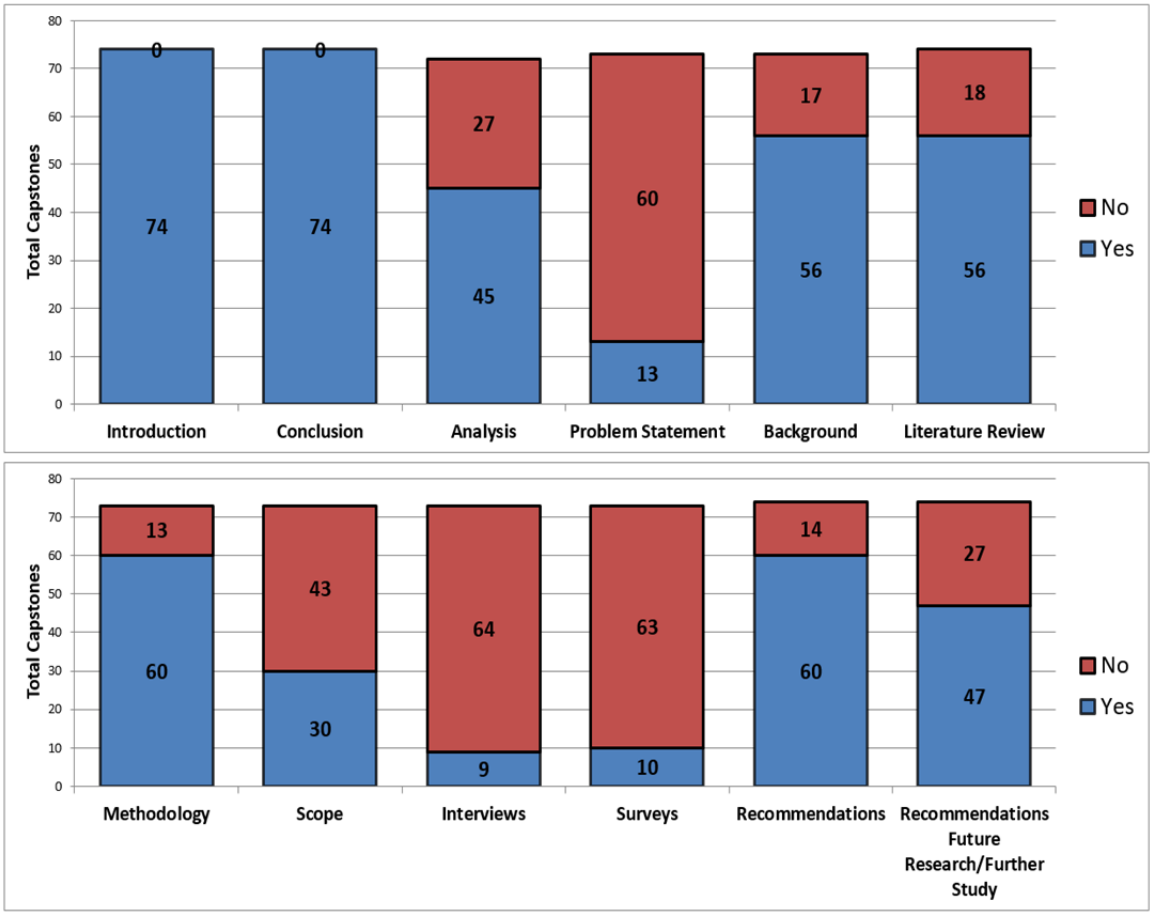


Figure 12. Capstone Content Elements

6. Findings

GSBPP archived projects provided a reactive source for identifying the voice of the process. The principal finding is that the process appears to lack external funding, external sponsorship, and internal standardization—16 percent of capstones are sponsored, only three percent are funded, and capstones vary considerably in their construction.

Certainly, the perceived lack of sponsorship and funding may be more attributable to misreporting on the SF 298 than it is to actual indifference from DOD stakeholders. If the former is true, then the process must have mechanisms that improve reporting accuracy; if it is the latter, then the capstone has to create more value for its external stakeholders.

It is also possible that many DOD stakeholders are simply unaware of the opportunity to leverage GSBPP student research. If this is true, then the process has to open better communications with its external customers. Funding limitations may also adversely affect the quality of student research.

C. PHASE 2B: FACULTY ADVISEMENT DATA

GSBPP faculty advisement data contributed the voice of the business (V.O.B.) for applying the PDSA framework. The advisement data expresses GSBPP's return on investment (ROI) in terms of the number of projects advised per employee on-hand. The project team recorded workload distribution trends for 1,115 capstone advisements occurring between 2011 and 2015 and analyzed the output for 56 full-time GSBPP faculty members over the same period.

Our analysis is limited to 56 of 81 full-time GSBPP faculty members for two reasons. First, full-time faculty members are the focus of GSBPP's process improvement efforts and so the project team did not perform detailed analysis of the advisement contributions from part-time or external (non-GSBPP) employees. Secondly, the project team was unable to positively account for the actual output of 25 full-time faculty members over the entire period (i.e., 2011 through 2015) and so we excluded those members from our analysis as well. A detailed explanation of our methodology is provided in Chapter III.

1. Average Advisements per Year

From 2011 to 2015, GSBPP full-time faculty members conducted about 2.8 capstone advisements per year, on average (see Table 12).

Table 13. Average Advisements per Year

Mean	2.8
Median	2.6
Mode	1.0
Standard Deviation	1.9
Minimum	0.2
Maximum	8.4
Range	8.2
Count	56

2. Workload Distribution

GSBPP's workload management tool (the 9-month model, or 9MM) directs all faculty members to perform their "fair share" of capstone advising, which equates to roughly four capstones per year for tenure-track faculty members and about six capstones per year for non-tenure track faculty members (GSBPP, 2009). Nearly 80 percent of GSBPP full-time faculty members conduct fewer than four capstone advisements per year, on average (see Figure 13 and Table 14).

Three of the four faculty members who averaged more than six advisements per year are non-tenure track (NTT) faculty. Four of the six faculty members who averaged less than one advisement per year are tenured, tenure-track (TTT) faculty members from the Management academic area.

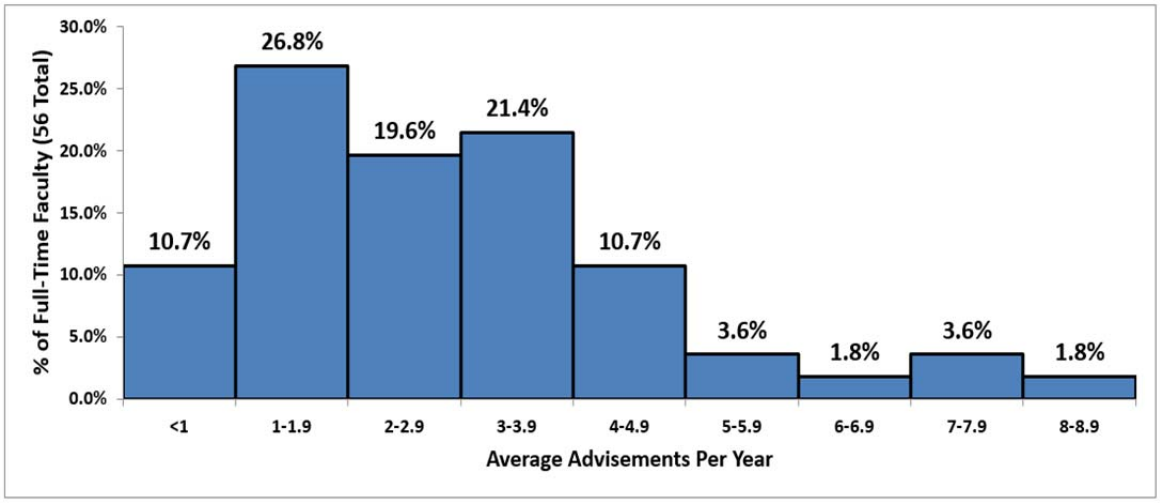


Figure 13. Workload Distribution

Table 14. Workload Distribution

Average Advisements per Year	No. of Faculty Members	Percent of Faculty Members
< 1	6	10.7 %
1.0 – 1.9	15	26.8 %
2.0 – 2.9	11	19.6 %
3.0 – 3.9	12	21.4 %
4.0 – 4.9	6	10.7 %
5.0 – 5.9	2	3.6 %
6.0 – 6.9	1	1.8 %
7.0 – 7.9	2	3.6 %
8.0 – 8.9	1	1.8 %
Total	56	100 %

3. Advisement Distribution by Advisor Type

GSBPP full-time employees accounted for 87 percent of all capstone advisements between 2011 and 2015; part-time GSBPP faculty performed three percent while external (non-GSBPP) faculty members performed ten percent of the advisements (see Figure 14). Full-time faculty members also attained the highest advisor-to-advisements ratio of 12:1 over the same period (see Table 15).

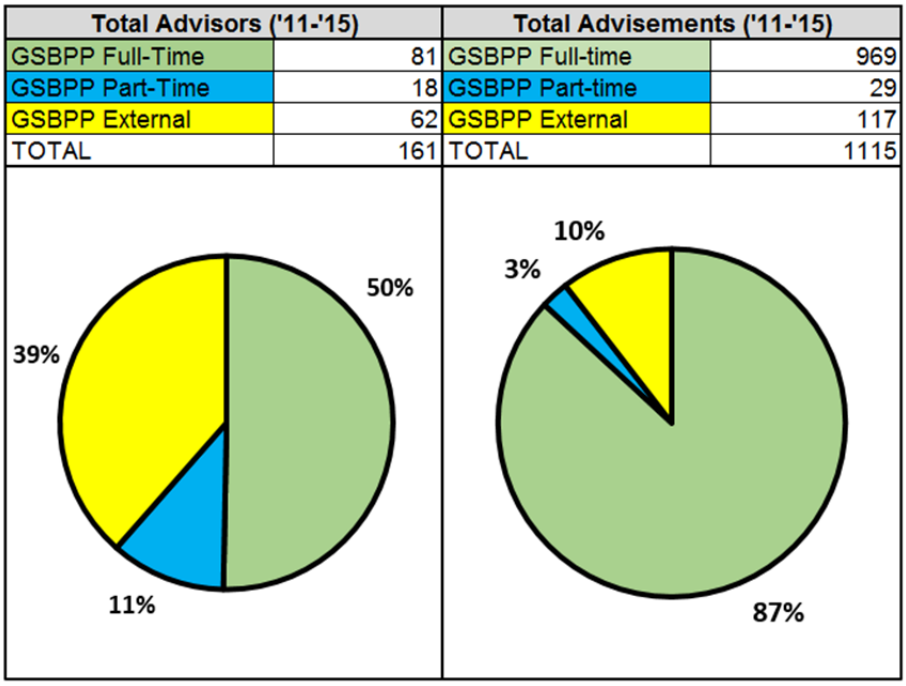


Figure 14. Advisement Distribution by Advisor Type

Table 15. Advisement Distribution by Advisor Type

Advisor Type	Total Members 2011–2015	Total Advisements 2011–2015	Ratio (approx.)
GSBPP Full-Time	81	969	12:1
GSBPP Part-Time	18	29	2:1
GSBPP External	62	117	2:1
Total	161	1,115	7:1

4. Advisement Distribution by Advisor Title

Between 2011 and 2015, associate professors, assistant professors, senior lecturers, and lectures all provided an equal share of advisements, about three per year for each advisor (see Table 16, Totals). Full professors provided a slightly lower contribution, about two advisements per year for each professor. For full-time faculty members who transitioned titles (e.g., promoted from assistant to associate professor, or from lecturer to senior lecturer, etc.) in a given year, the project team recorded their advisement contributions for that year in a separate, *blended* category since it was

infeasible for the project team to separate capstone advisements during the year into distinct pre-and-post-promotion title pools. GSBPP hiring practices account for the change in total faculty members from 51 in 2011 to 56 in 2015.

Table 16. Advisement Distribution by Advisor Title

Title	Total Members	Total Advisements	Ratio (approx.)
2011			
Professor	5	12	2:1
Associate Professor	15	29	2:1
Assistant Professor	13	29	2:1
Senior Lecturer	12	26	2:1
Lecturer	6	13	2:1
2012			
Professor	6	9	2:1
Associate Professor	16	40	3:1
Assistant Professor	12	32	3:1
Senior Lecturer	12	37	3:1
Lecturer	6	6	1:1
Lecturer/Sr. Lecturer Blend	1	11	11:1
Assistant Prof/Associate Prof Blend	1	2	2:1
2013			
Professor	6	12	2:1
Associate Professor	16	47	3:1
Assistant Professor	11	36	3:1
Senior Lecturer	13	44	3:1
Lecturer	6	22	4:1
Assistant Prof/Associate Prof Blend	1	2	2:1
Associate Prof/Prof Blend	1	3	3:1
2014			
Professor	7	12	2:1
Associate Professor	19	51	3:1
Assistant Professor	10	42	4:1
Senior Lecturer	13	53	4:1
Lecturer	6	27	5:1
Assistant Prof/Associate Prof Blend	1	1	1:1
2015			
Professor	7	8	1:1
Associate Professor	18	59	3:1
Assistant Professor	10	33	3:1
Senior Lecturer	13	41	3:1

Title	Total Members	Total Advisements	Ratio (approx.)
Lecturer	6	22	4:1
Associate Prof/Prof Blend	2	4	2:1
Totals			
Professor	31	53	2:1
Associate Professor	84	226	3:1
Assistant Professor	56	172	3:1
Senior Lecturer	63	201	3:1
Lecturer	30	90	3:1
Lecturer/Sr. Lecturer Blend	1	11	11:1
Assistant Prof/Associate Prof Blend	3	5	2:1
Associate Prof/Prof Blend	3	7	2:1

5. Advisement Distribution by Tenure Status

Overall, non-tenured faculty members are the largest contributor of capstone advisements with a 3:1 advisements-to-advisor ratio during 2011 to 2015 (see Table 17, Totals). Tenured faculty members are advising slightly less with a 2:1 advisements-to-advisor ratio during the same period. Similar to our sorting process for advisement distributions by title, the project team recorded the advisement contributions of faculty members who transitioned tenure status during a given year into a separate, *blended* category since it was infeasible for the project team to separate capstone advisements during the year into discrete pre-and-post-tenure pools. Again, GSBPP hiring practices account for the change in total faculty members from 51 in 2011 to 56 in 2015.

Table 17. Advisement Distribution by Tenure Status

Year	Total Members	Total Advisements	Ratio (approx.)
2011			
Tenured	14	26	2:1
Non-tenured	35	81	2:1
Blend	2	9	5:1
2012			
Tenured	16	38	2:1
Non-tenured	37	98	3:1
Blend	1	2	2:1

Year	Total Members	Total Advisements	Ratio (approx.)
2013			
Tenured	17	50	3:1
Non-tenured	36	114	3:1
Blend	1	2	2:1
2014			
Tenured	18	39	2:1
Non-tenured	35	138	4:1
Blend	3	9	3:1
2015			
Tenured	21	47	2:1
Non-tenured	34	109	3:1
Blend	1	11	11:1
Totals			
Tenured	86	200	2:1
Non-tenured	177	540	3:1
Blend	8	33	4:1

6. Findings

The project team observed elements of conformity and noncompliance between the stated 9MM advisement targets and the actual advisements performed during 2011 to 2015. In accordance with 9MM, non-tenured faculty members are indeed performing more advisements per member than are tenured faculty. The advisement targets contained in the 9MM, however, do not appear achievable on a GSBPP-wide scale. Essentially, there are too few advising opportunities each year for all employees to achieve the 9MM's prescription of 4–6 advisements annually.

For instance, had only full-time faculty members performed all 1,115 capstone advisements occurring between 2011 and 2015, this would have allotted just 2.8 advisements per year for all full-time faculty members combined (= 1,115 advisements ÷ 81 full-time employees ÷ 5 years). Interestingly, 2.8 advisements per year approximates what our sample of 56 full-time faculty members actually achieved.

This finding may help to explain why some full-time employees are achieving the 9MM standards while others are not. When faculty members establish annual targets of 4–6 advisements in accordance with the 9MM, and then set out to meet or exceed those

goals, they leave fewer advising opportunities to the rest of the faculty. Therefore, even if all full-time faculty members were motivated to advise 4–6 capstones annually, many would find that some advising opportunities simply do not exist.

Later in Chapter IV, the project team will interview the GSBPP faculty to determine their actual motivation relative to advising capstone projects.

D. PHASE 3: INTERVIEW AND SURVEY

Following our collection and analysis of reactive data sourced from the exit survey, archived capstones, and faculty advisement data, the project team performed faculty interviews and a new student survey to define the capstone's features more precisely through detailing its value, content, and process. Table 18 provides a summary of interviewees' assessments of the value of the GSBPP capstone on each dimension where "L" indicates "low value" and "H" indicates "high value." The subsequent discussion elaborates the table.

Table 18. Summary of Interviewees' Assessments of the Value of the GSBPP Capstone

	Value to Student	Value to GSBPP	Value to DOD	Value to Advisor
Interviewee 1	H	H	H	H
Interviewee 2	H	L	H	H
Interviewee 3	H	H	H	H
Interviewee 4	H	H	H	H
Interviewee 5	H	H	H	H
Interviewee 6	H	L	L	H
Interviewee 7	H	L	H	H
Interviewee 8	H	H	H	H
Interviewee 9	H	H	H	H
Interviewee 10	H	H	H	L
Interviewee 11	H	H	L	H

1. Phase 3a: Faculty Interviews

As shown in Table 18, GSBPP full-time faculty members generally assessed positive value derived from the GSBPP capstone, distributed along four dimensions: value to the student, value to GSBPP, value to DOD, and value to the advisor.

(1) Value to the Student

As shown in Table 18, most interviewees believed that the capstone added value to student learning. Interviewees perceived that student learning occurred even when the amount of learning was not readily apparent in the final product, or even when the students themselves had not perceived the amount of learning that had occurred. For example, as one interviewee noted,

> The thesis itself looks like a mess, but the student went from A to Z in the process and had an incredible learning experience. And that's not necessarily evident in the thesis product. And sometimes in fact, you might have a thesis product that looks crappy, but what the student got out of it was something great.

According to some interviewees, no other GSBPP offering replicates the degree of critical and creative thinking that the capstone requires. Furthermore, several interviewees indicated that the capstone provided a unique opportunity to reinforce learning concepts introduced in previous courses while joining multiple academic disciplines to solve a real-world problem. As one interviewee stated,

> I believe the unique mission of NPS, I think accommodates a thesis very well in terms of supporting what leadership wants students to get from their experience at NPS. I think having a capstone event where they pull together a number of topics is a useful exercise and I think ultimately the projects themselves may have a beneficial effect on relative branches; Army, Navy, Marine.

Conducting disciplined research, interviewees said, is a skill that is directly transferrable to the students' professional careers. Further, many interviewees noted that capstones provided students with an opportunity to make meaningful contributions to their military services. As one interviewee explained,

> The thesis itself is not really the source of value; it's just a description of what is really the value. We do analysis, it's the analysis that they want; they don't really care about the thesis.

Finally, several interviewees noted that some capstones are so relevant that they warrant publication in professional or academic periodicals.

(2) Value to GSBPP

As shown in Table 18, interviewees also assessed positive value for GSBPP as an institution, albeit to a lesser degree when compared to the amount of value they said students derived from the capstone. Faculty members noted that *conducting research* is one of GSBPP's core functions and that the capstone provided a convenient means to that end. According to one interviewee, the capstone "improves the, what I consider to be the research base premise of the school." Many said that the capstone is a differentiator that sets GSBPP apart from other MBA programs nationally, building GSBPP's reputation and academic standing among its peers. For example, one interviewee said,

> One of the things that is pretty unique about the NPS MBA program is the thesis requirement. And, you know obviously, that differentiates us from other MBA programs and is in my mind, is one of the things that is a significant source of value to the Navy.

Furthermore, another interviewee stated,

> In the course of accreditation, and the school's standing in academia, hey, the fact that we require this thesis or this project probably lends weight to, to the program.

Interviewees also noted that capstones aid GSBPP's accreditation prospects whenever student research is published in peer-reviewed periodicals. Capstones assist GSBPP financially as well, according to interviewees, if the capstones incentivize DOD organizations to send their members to GSBPP to tackle some real-world problem. Lastly, interviewees noted that capstones help GSBPP maintain situational awareness by staying current on present DOD initiatives.

(3) Value to DOD

As shown in Table 18, interviewees assessed a lower, but still very high value for the capstone to the DOD. According to some interviewees, the GSBPP capstone provides

a tangible return on investment to DOD sponsors in exchange for sending their members to NPS. Interviewees noted that sponsors often received viable solutions to real-world problems, some of which might actually work if and when they are implemented. As one interviewee stated,

> Some of these projects are not just an academic exercise, but they could result in findings, changes in methodology, factual discoveries, that maybe a command or the department could put in place and there might actually be, maybe financial benefit from a change in methodology.

Additionally, interviewees suggested that sponsors gain added confidence in their members' ability to think strategically about complex issues as a result of capstone projects.

(4) Value to the Advisor

As shown in Table 18, faculty members derived high personal and professional benefits from advising student research. For example, one interviewee stated, "The exposure to other ideas and other ways of thinking about things, that is, that I think is one of the benefits" when asked how advising projects/theses benefited him or her personally or professionally. Every faculty member received personal gratification as they guided students through disciplined research resulting in practical solutions to real-world problems. Faculty members relish the opportunity to learn about new and interesting topics, the opportunity to gain new insights and student-practitioner perspectives on familiar problems, and the opportunity to build personal relationships with students. For example, one interviewee stated, "I love working with students. I get to know students better. That's probably the biggest reward for me." Furthermore, another interviewee stated, "You're getting access to the research students are doing, which is usually quite up to date. They're picking up subjects that are important to DOD." Advising also allowed interviewees to refine their own approach to research and further sharpen their individual creative and critical thinking skills. Additionally, capstone advising enriched the classroom environment through the incorporation of real-world examples. Some capstones even led to joint publication opportunities with student-authors. For example,

one interviewee stated, "I have published papers that I probably would not have been able to publish without the knowledge of my student."

Interviewees said they were most burdened by the amount of time that advising consumes, although the time commitment did not detract from the capstone's value. For example, one interviewee stated, "The time commitment; it really is a major investment in time." Two interviewees did express some frustration with the overall quality of student writing, saying that poorly written papers made it more difficult to evaluate the capstone's content. One interviewee stated, "Some students are pretty terrible writers, and it's hard to read some work when the writing is not very well developed."

a. Content Assessment

All interviewees said that are keenly aware of the capstone's content requirements. In fact, many described their role as that of a "content-advisor," meaning that their primary duties were to 1) review the capstone for *content* as opposed to grammar, punctuation and style, and 2) *advise* the capstone while avoiding total ownership, which belonged to the student. Their level of understanding about the capstone's content seemed firmly rooted in experience, with most interviewees saying that a "good" capstone is readily apparent to them upon review. One interviewee stated, "I know it when I see it" when asked how he/she determines if a project or thesis is ready and acceptable for publishing with Dudley Knox Library.

Faculty members also used similar gauges for determining when a capstone was complete and ready for publishing. The gauge employed most often was that of time remaining until NPS graduation. Some interviewees acknowledged that since the capstone is a graduation requirement they often felt obliged to approve capstones even if those capstones were slightly underdeveloped. Strong and evident logic linking arguments to supporting evidence, analysis, and conclusions is another key indicator that the capstone is finished. One interviewee stated, "In that final read through, of the final draft, if it's logical, the writing's good, okay, I think it's probably ready to go to the editors or to the library." Another interviewee stated, "Mostly, it's the flow of logic I look for." More than anything, interviewees wanted capstones to show that the student had learned something new and if the capstone accomplished that, then it was usually good enough to publish.

Interviewees disagree on the current method of topic selection. Some faculty members approve of the current method that allows students to choose their own topic even when those topics diverge from current DOD initiatives. Other faculty members said that students should only research defense-related issues with assigned sponsors who want the student's output. For example, one interviewee said "sponsor-related topics" when asked about topic selection for a GSBPP capstone.

b. Process Assessment

Interviewees shared their knowledge about capstone processes (to include their knowledge about capstone funding and sponsorship processes), which they generally obtained through advising experiences gained over time. Interviewees also shared their advising lessons learned. Additionally, interviewees discussed their personal decision-making process for deciding when to accept or decline a capstone advisement opportunity. Finally, interviewees explained their perceived role in the capstone process, and discussed their advisement strategies employed during the process. In general, interviewees were far less confident in their knowledge about capstone processes as compared to their knowledge about capstone content.

(1) Student Responsibility for Capstone Processes

Many interviewees said that they were mostly unconcerned about capstone processes. Interviewees believed that students are solely responsible for capstone processes and that advisors have a very limited role in capstone processes, if any role at all. One interviewee said, "The student is in the driver's seat, okay. I mean, you [the student] need to stay on top of everything procedure wise." For this reason, most interviewees did not perceive substantial value in gaining additional, personal knowledge about capstone processes.

(2) Advising Experience

Most interviewees said that their degree of understanding about capstone processes is closely related to their advising experiences gained over time. One interviewee stated, "I kind of took my lead from the professors I worked with, but there's not really a you know, there's no, there's no six page manual for advising students." Most interviewees initially learned

about capstone processes through seeking out or teaming with seasoned faculty members who had more advising experience. One interviewee stated,

> It's very much a mentoring process between kind of, you know, the senior advisor and the more junior ones as they're starting off understanding how the process goes.

Interviewees also explained that they learned through repetition while drawing heavily upon their previous experiences as an instructor or former graduate student.

(3) Advising Decision

All interviewees said that they rarely, if ever, declined a student's request to advise a capstone. Any refusals were typically the result of a mismatch between the student's proposed research and the advisor's academic area of interest or expertise. One interviewee said, "One big consideration is expertise. Are you a good advisor on this topic?" Another interviewee stated, "If a student's interested in a thesis or a topic that I don't really know enough about, then I usually take myself off it." Other key considerations included student enthusiasm, topic relevance to DOD, topic originality, advisor availability (i.e., current combined workload of advising, teaching and service), and project lead time.

(4) Advisement Target

Most interviewees cited targets of roughly 3 – 5 ongoing capstone advisements throughout the year. Three of eleven interviewees did not maintain targets and will generally advise any student upon request. Two faculty members proposed having a "cap" or "ceiling" of 3 – 4 ongoing advisements in order to avoid bottlenecks when multiple reviews are due. One interviewee said, "I think three or four should be about the max." Another interviewee referenced a study performed by a fellow GSBPP colleague that recommends 2.83 advisements annually for each GSBPP faculty member, to which he subscribed. He added that faculty members should provide justification if they wished to advise more than three capstones in a given year.

(5) Advisement Strategy

Advisement strategies differed among interviewees. In general, faculty members used either a standardized approach to advising with very little variation or a customizable approach that adjusted to their students' particular needs and capabilities.

One interviewee stated, "One size does not fit all. You tailor your advising strategy to different students." Faculty members with a standardized approach tended to describe themselves as "hands-on" advisors while faculty members with customizable strategies tended to describe themselves as "hands-off." Another interviewee stated, "It's different with each student, dependent on the student need and the topic." Some faculty members only reviewed completed capstone drafts and others favored iterative, standalone chapter reviews. Finally, some faculty members preferred for their students to draft the capstone in chapter order (e.g., Chapter I, II, III, IV, V) while others directed students to work from the inside out (e.g., Chapter III, II, IV, V, I).

(6) Capstone Funding and Sponsorship

Interviewees disagreed on the importance of reporting capstone funding and sponsorship statuses on the Standard Form (SF) 298, Report Documentation Page. Two of eleven faculty members stated that neither funding nor sponsorship are important data points for GSBPP to collect, while other faculty members were less certain. When asked whether it was important to collect funding information, one interviewee stated, "No, I don't think it's important to report. In fact, it would be a bad thing to report because people might then interject themselves in the process." Nearly half of the interviewees said that these data points are important to collect because they measure the level of external interest in student research (i.e., sponsor buy-in). According to one faculty member, more sponsorship and funding means that GSBPP is responding better to DOD's needs.

c. Lessons Learned

Interviewees shared several lessons relative to capstone advising. One interviewee stated, "I've learned to back off and let the student drive the process. It is their thesis; they need to take responsibility for the time, the data, the writing of it." Some of the other key and consolidated lessons included the following.

- Holding students to deadlines
- Ensuring that students retain total ownership of their capstones
- Educating students on how to conduct disciplined research

- Junior faculty members should start as second readers and then progress to lead or co-advisors on capstones

2. Phase 3b: Student Survey

The project team distributed the survey electronically to 119 GSBPP students in their sixth academic quarter, of which 67 students responded for a 56 percent response rate. The results that follow, starkly contrast in comparison to the GSBPP exit survey. The GSBPP exit survey—while still revealing that GSBPP students have a generally less favorable view of the capstone—is administered to students after many have already completed (or are nearly complete with) the capstone report. The new student survey, however, was administered to GSBPP students deeply immersed in the grueling and stressful process of completing the capstone, with NPS graduation requirements looming on the horizon. For this reason, the project team would suspect for student responses to the new student survey to show increased negativity about the capstone. In Chapter V, the project team proposes future study recommendations to counter this identified research limitation.

As previously discussed, the new student survey focused primarily on three performance measures to assess the capstone's value, content, and process from the students' (i.e., customers') perspective. The key findings for each measure are discussed in the following sections.

a. Value Assessment

(1) Skills Application

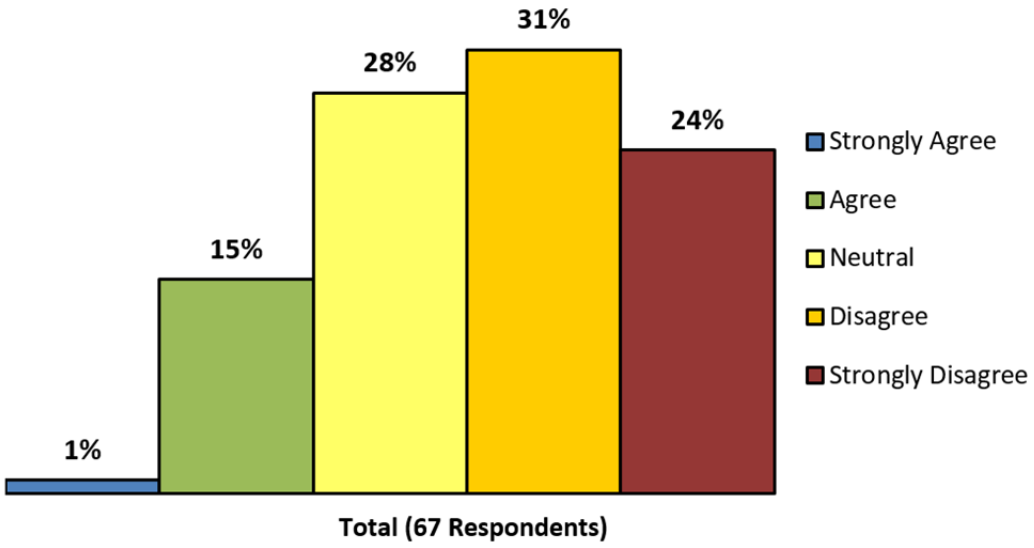
The project team asked the survey population to assess how well the capstone allowed them to demonstrate their level of mastery over graduate-level learning outcomes, using a five-point Likert scale with ordered responses as follows.

The GSBPP project/thesis accurately assesses my degree of mastery over graduate-level learning outcomes.

- Strongly Agree
- Agree
- Neutral

- Disagree
- Strongly Disagree

Out of 67 respondents, 16 percent either *strongly agree* or *agree* that the capstone accurately assesses their degree of mastery over graduate-level learning outcomes; 55 percent *strongly disagree* or *disagree*, and 28 percent are *neutral*. This finding suggests that students did not typically perceive a strong link between the capstone and their graduate school studies (see Figure 15).



Student Survey Question No. 6 asked students the following question: The GSBPP project/thesis accurately assesses my degree of mastery over graduate-level learning outcomes.

Figure 15. Student Survey Question No. 6

(2) Burden versus Benefit

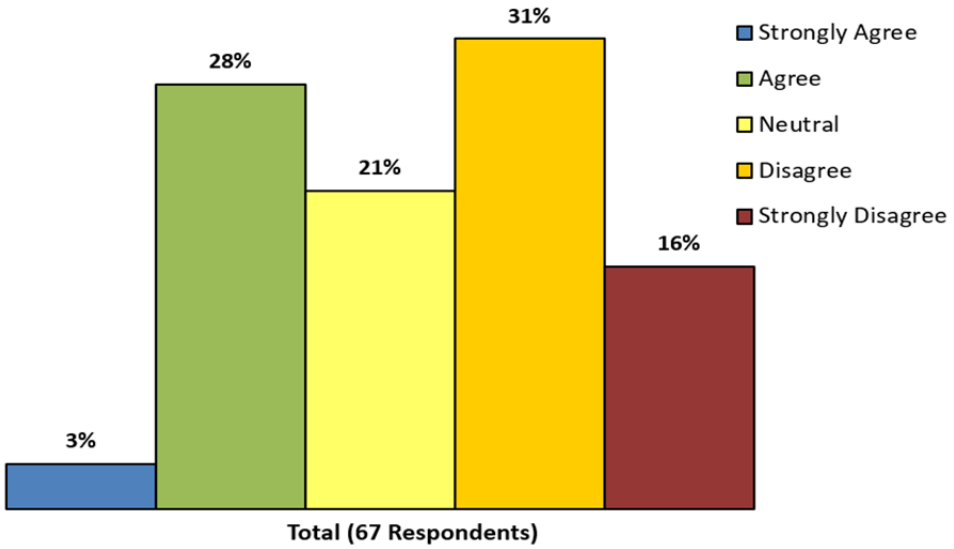
The project team also wanted to know if the survey population perceived an appropriate balance between the capstone's burdens and its benefits. Using a five-point Likert scale, students responded to the following question.

The personal/professional benefits that I derived from completing the GSBPP project/thesis are well worth the effort that I spent on completing it.

- Strongly Agree

- Agree
- Neutral
- Disagree
- Strongly Disagree

Out of 67 respondents, 31 percent either *strongly agree* or *agree* that the derived benefits at least equal or outweigh the derived costs; 47 percent *strongly disagree* or *disagree* and 21 percent are *neutral*. This finding suggests that students did not typically perceive a positive balance between the capstone's burdens and its benefits, with the perceived costs usually outweighing the perceived benefits (see Figure 16).



Student survey question No. 7 asked students the following question: The personal/ professional benefits that I derived from completing the GSBPP project/thesis are well worth the effort that I spent on completing it.

Figure 16. Student Survey Question No. 7

(3) Relative Benefit to the Student

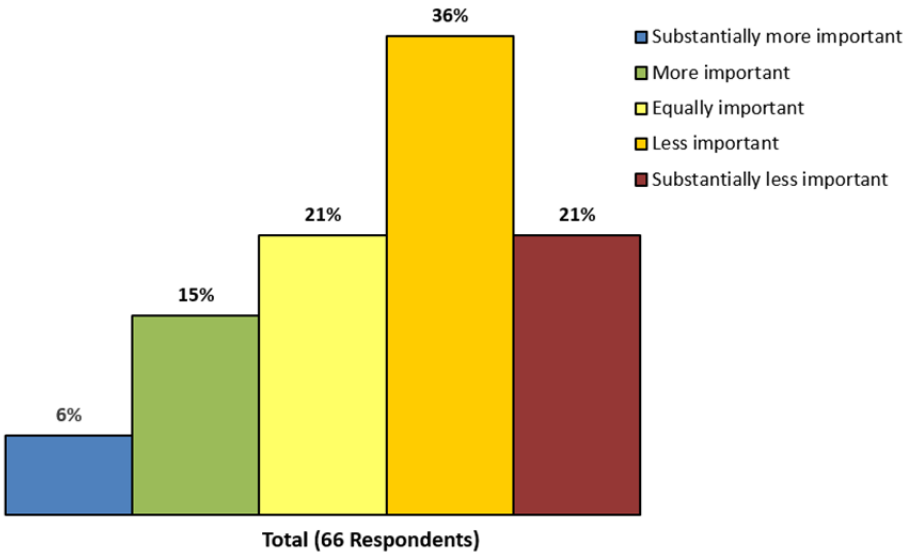
Capstone value is defined as the degree of intrinsic and extrinsic usefulness, worth, and importance that one derives from the capstone often with consideration given to the degree of value derived from other sources. The project team wanted to know,

specifically, how much value the student derived from the capstone in comparison to the value that the student derived from their academic coursework.

Without regard to NPS graduation requirements, the GSBPP project/thesis is _____ in comparison to my academic coursework.

- Substantially more important
- More important
- Equally important
- Less important
- Substantially less important

Sixty-six students responded to this question and 21 percent said that the capstone was *substantially more important* or *more important* than their academic coursework; 57 percent found the capstone *substantially less important* or *less important* than their coursework and 21 percent were *neutral*. To summarize, students derived more value from their academic coursework than they comparatively derived from the capstone (see Figure 17).



Student survey question No. 9 asked students the following question: Without regard to NPS graduation requirements, the GSBPP project/thesis is _____ in comparison to my academic coursework.

Figure 17. Student Survey Question No. 9

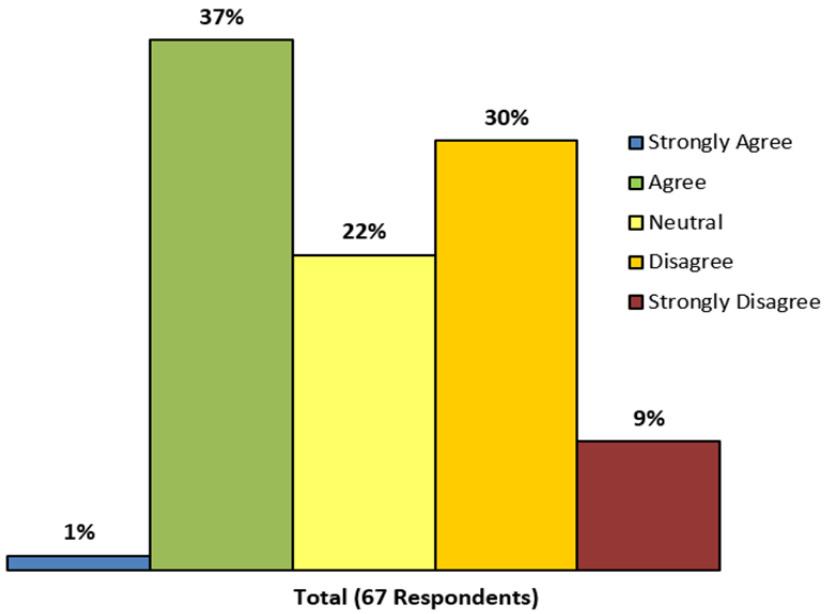
(4) Overall Value to the Student

Another survey question asked students to consider the overall value of the capstone as a culminating exercise. Again using a five-point Likert scale with ordered responses, 67 students answered the following question.

The GSBPP project/thesis is a valuable culminating exercise.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Thirty-eight percent of respondents either *strongly agree* or *agree* that the capstone is a valuable culminating exercise; 39 percent *strongly disagree* or *disagree* that the capstone is value-added, and 22 percent are *neutral* (see Figure 18).



Student survey question No. 5 asked students the following question: The GSBPP project/thesis is a valuable culminating exercise.

Figure 18. Student Survey Question No. 5

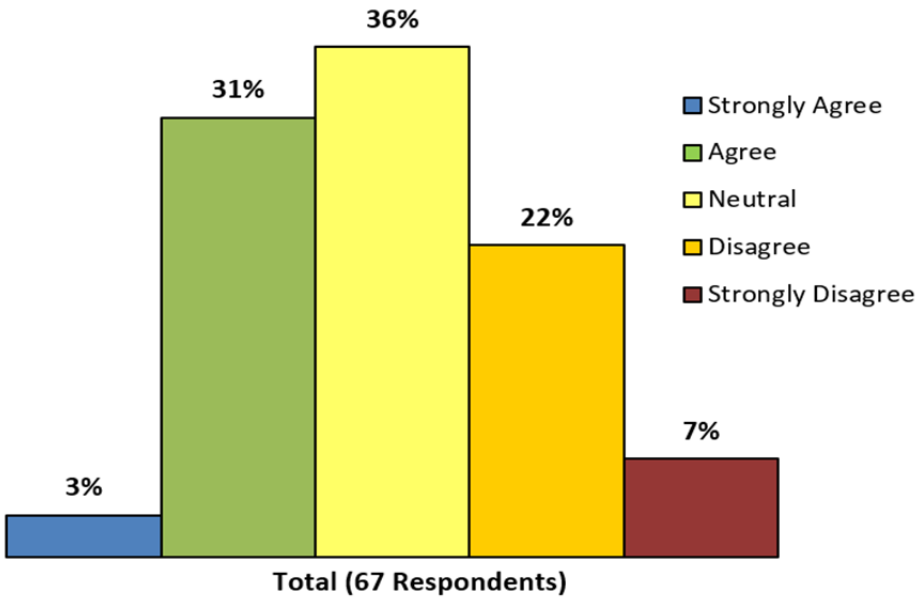
(5) Value to Others

Student research should aid national defense by developing or advancing processes, materials, and technologies for future military service applications, according to Office of the Chief of Naval Operations Instruction 5450.210D. In other words, the capstone should be valuable to principals other than just the student. Therefore, the project team asked the survey population if they thought their capstones would be valuable to others in the future.

My GSBPP project/thesis will be valuable for others to reference in the future.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Of 67 respondents, 34 percent replied with either *strongly agree* or *agree*; 29 percent replied with *strongly disagree* or *disagree* and 36 percent are *neutral*. Roughly the same numbers of students are certain that their capstones will be valuable to others, as are certain that their capstones will not add value, as are unsure (see Figure 19).



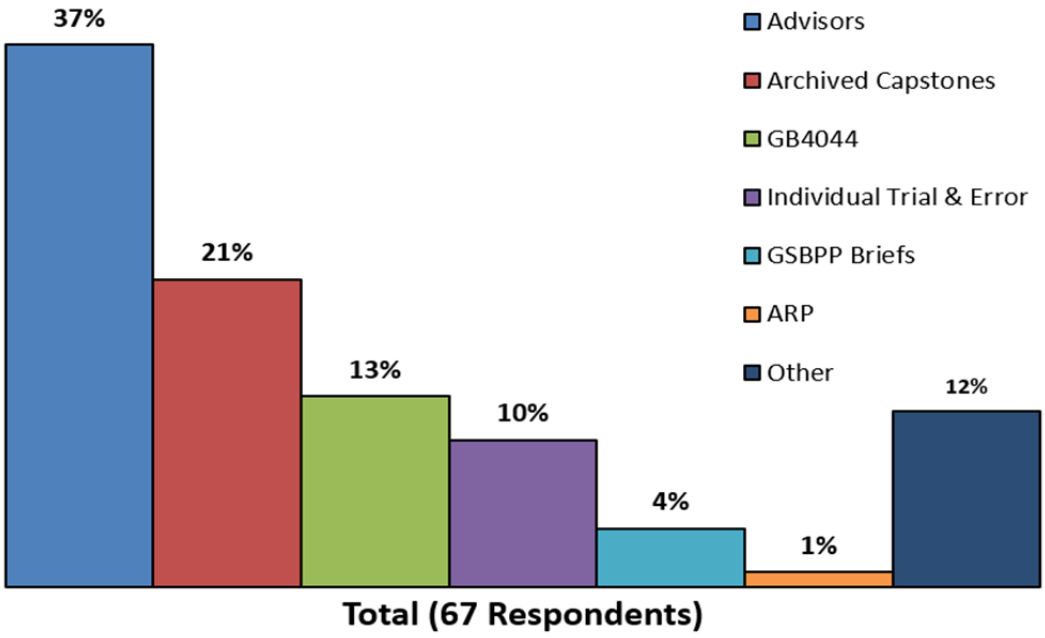
Student survey question No. 8 asked students the following question: My GSBPP project/ thesis will be valuable for others to reference in the future.

Figure 19. Student Survey Question No. 8

b. Content Assessment

(1) Content Knowledge Source

A survey question asked students to elect their primary source for gaining knowledge about the capstone's structure and content. Figure 20 shows the students' utilization of the most common knowledge sources available. The top three sources were capstone advisors (37 percent), archived capstones (21 percent), and GB4044, Defense-focused Managerial Inquiry (13 percent). GB4044 is informally known to GSBPP students as the *thesis preparation course*.

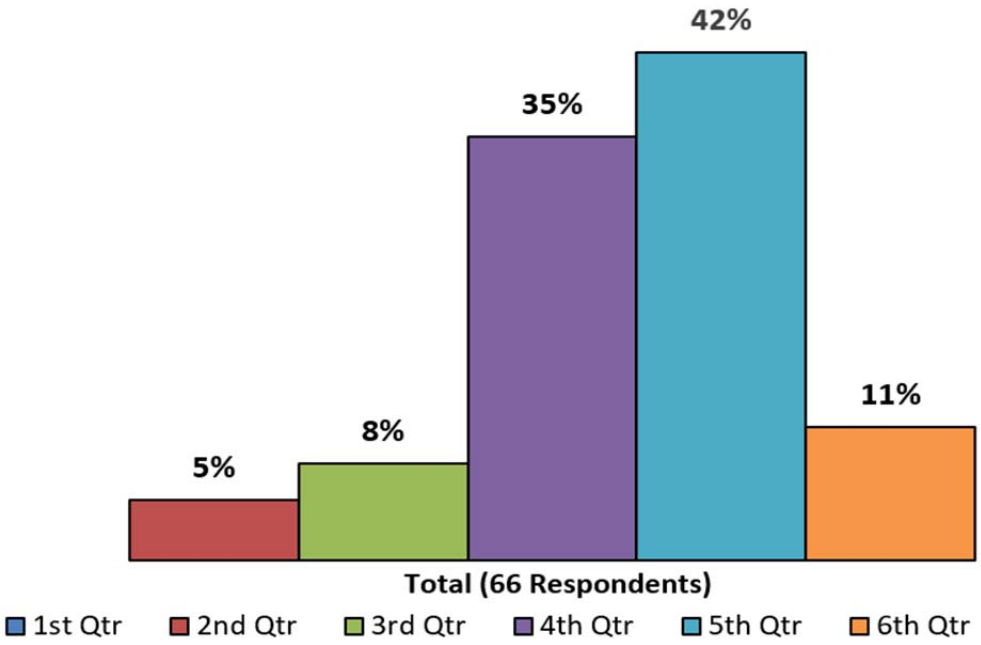


Student survey question No. 10 asked students the following question: My primary source for gaining knowledge about the structure and content of my GSBPP project/thesis report.

Figure 20. Student Survey Question No. 10

(2) Content Knowledge Timing

In addition to knowing *where* students gained knowledge about the capstone's content and structure, the project team was also interested in knowing *when* students acquired that knowledge. According to survey responses, 77 percent of students gained a full and complete understanding about the capstone's structure and content in either the fourth or fifth academic quarter (see Figure 21).



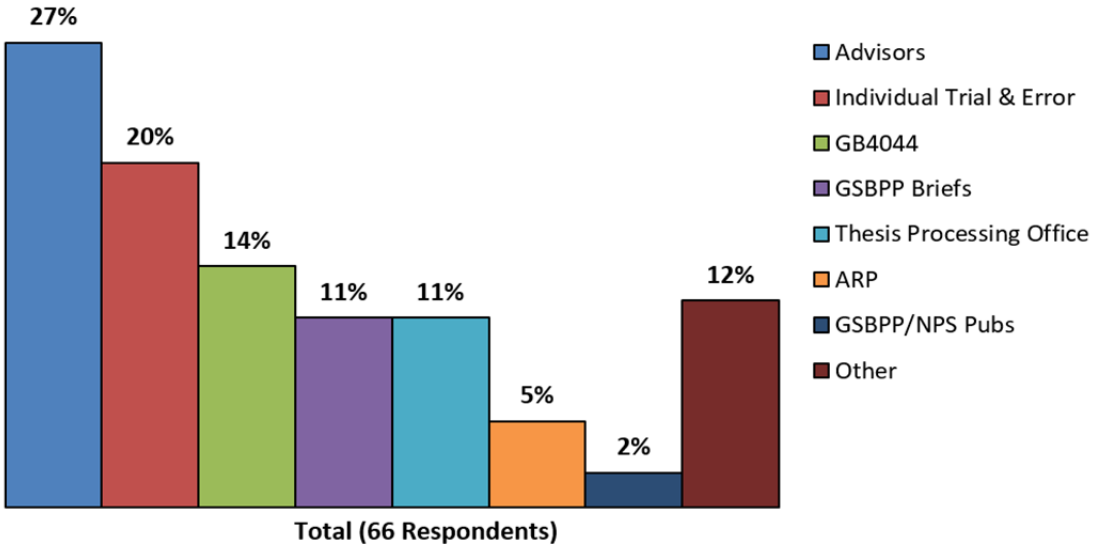
Student survey question No. 11 asked students the following question: I gained a full and complete understanding of the structure and content of my GSBPP project/thesis during the.

Figure 21. Student Survey Question No. 11

c. Process Assessment

(1) Process Knowledge Source

Another survey question asked students to choose their primary source for learning about the capstone process. Figure 22 shows the students' utilization of the most common knowledge sources available. Once again, capstone advisors were the students' number one selection (27 percent). Aside from capstone advisors, students learned about the process most often through individual trial and error (20 percent) or GB4044 (14 percent).

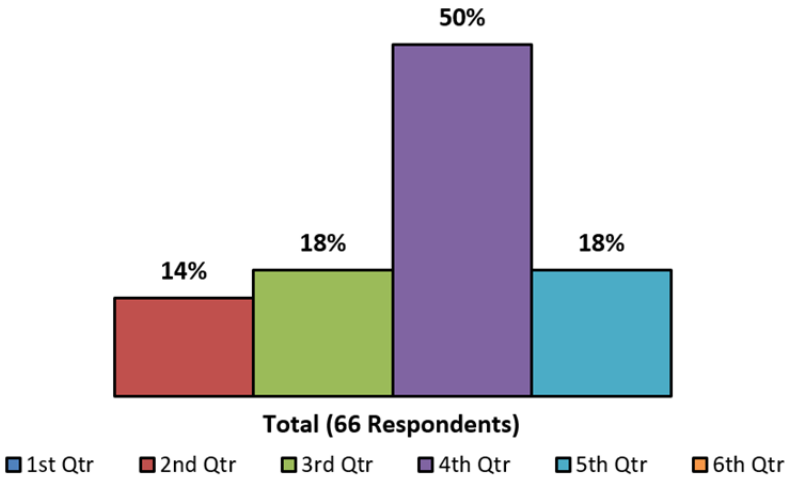


Student survey question No. 12 asked students the following question: My primary source for gaining knowledge about the GSBPP project/thesis process was through.

Figure 22. Student Survey Question No. 12

(2) Lead Advisor Selection

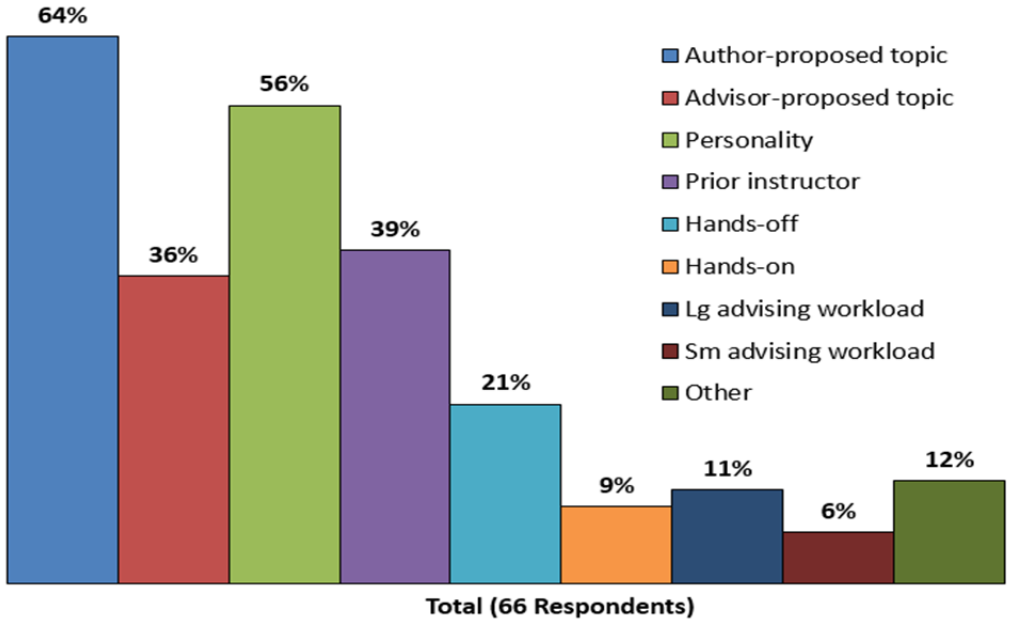
The project team wanted to know when certain process steps occurred to help develop the existing as-is state for the GSBPP capstone. According to survey responses, 50 percent of students chose their lead capstone advisor in their fourth academic quarter (see Figure 23).



Student survey question No. 14 asked students the following question: I selected my GSBPP project/thesis lead advisor during the.

Figure 23. Student Survey Question No. 14

Lead advisor selection criteria varied by respondent, as shown in Figure 24. The top four reasons for the students' selection were 1) the advisor had the right credentials to guide the student's proposed research topic (64 percent), 2) the advisor had a well-suited personality (56 percent), 3) there was a prior instructor-student affiliation (39 percent), and 4) the student had an interest in an advisor-proposed research topic (36 percent).

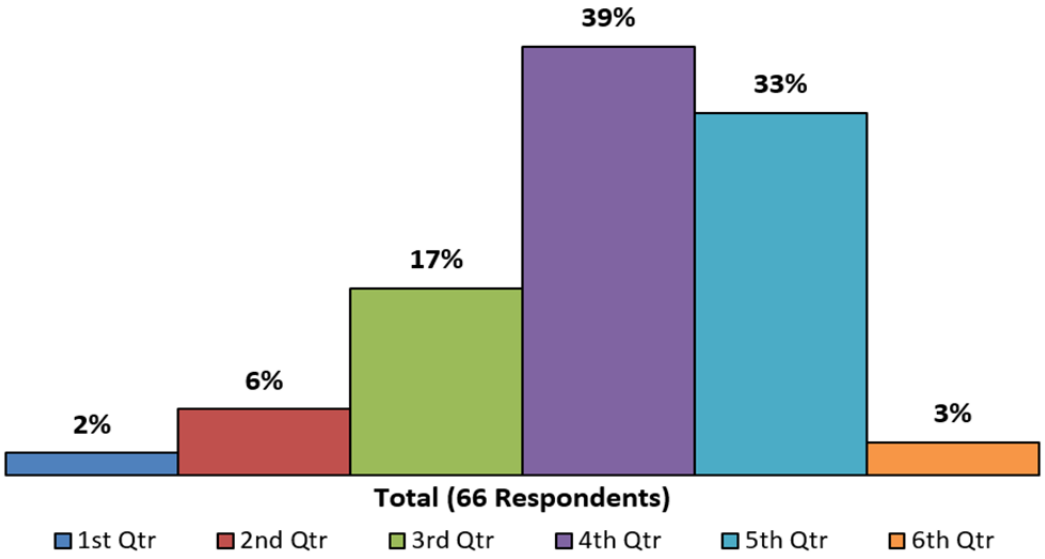


Student survey question No. 16 asked students the following question: I chose my lead advisor because (mark all that apply).

Figure 24. Student Survey Question No. 16

(3) Topic Selection

The project team asked the survey population when it chose their capstone topics and began earnest research. For most students, this step occurred in either the fourth or fifth academic quarter (39 percent and 33 percent, respectively). See Figure 25.

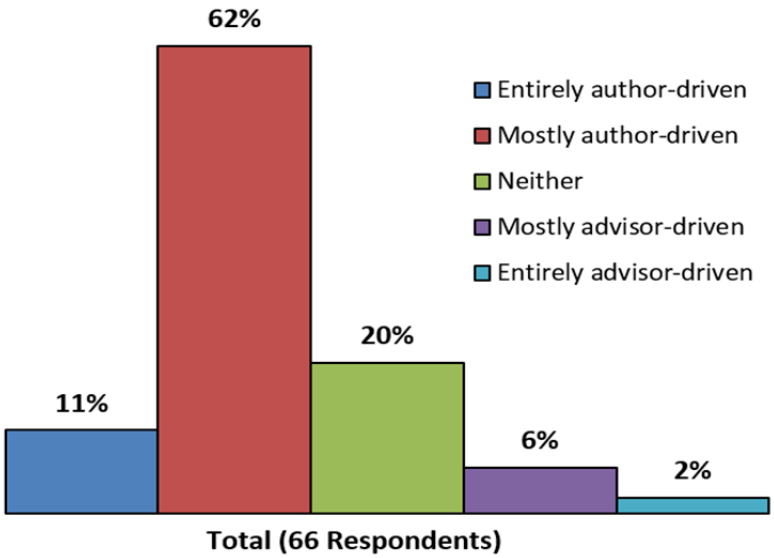


Student survey question No. 13 asked students the following question: I gained sufficient knowledge, skills, and experiences to select a worthwhile research topic (and to begin earnest research on my topic) during the.

Figure 25. Student Survey Question No. 13

(4) Process Driver

With topic and advisors in tow, students embark on the endeavor to produce the capstone report. The project team wanted to know if the process was more author- or advisor-driven from start to finish. A majority of respondents (73 percent) said that the process was entirely or mostly author-driven; eight percent said the process was entirely or mostly advisor-driven, and 20 percent said that it was neither author-driven nor advisor-driven (see Figure 26).

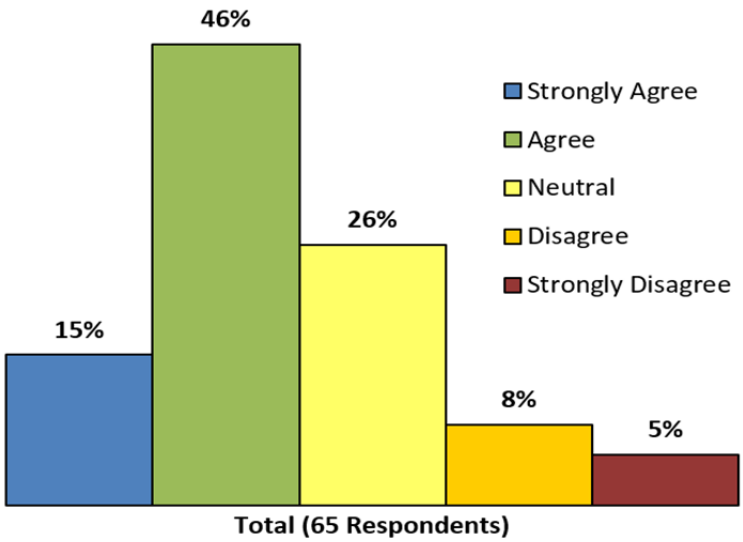


Student survey question No. 17 asked students the following question: From start to finish, producing the GSBPP project/thesis report was.

Figure 26. Student Survey Question No. 17

(5) Process Clarity

Advisors guide students through the process of producing capstone reports; therefore, a survey question asked participants to respond as to whether their advisors had clear, discernable, and structured approaches to guiding capstones. Of 65 respondents, 61 percent either *strongly agree* or *agree* that their advisors had definite advising strategies; 13 percent *strongly disagree* or *disagree* and 26 percent were *neutral* (see Figure 27).

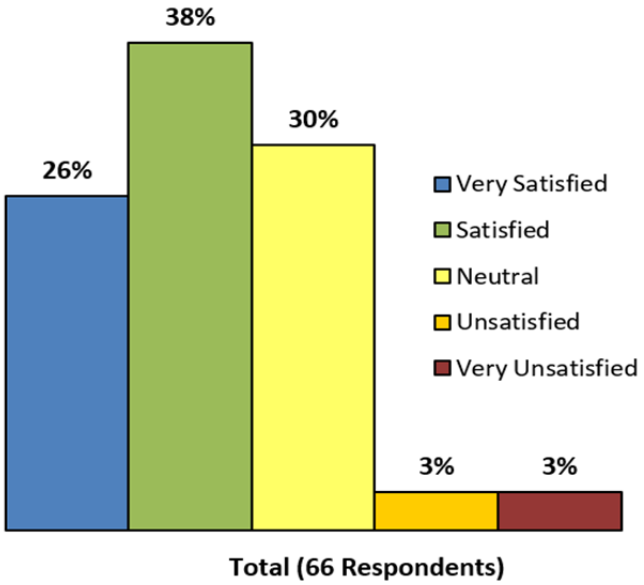


Student survey question No. 22 asked students the following question: My advisor had a clear, discernible, and structured approach to guiding my GSBPP project/thesis.

Figure 27. Student Survey Question No. 22

(6) Interactions with Capstone Advisors

Other survey questions measured the students' degree and satisfaction with, and methods for interacting with, their capstone advisors. Sixty-four percent of respondents said that they were either *very satisfied* or *satisfied* with the extent of interactions (e.g., face-to-face meetings, email exchanges) between the student and his or her advisors. Six percent of respondents were either *very unsatisfied* or *unsatisfied* with the level of interaction and 30 percent were *neutral*. Student satisfaction with the student-advisor communications is shown in Figure 28, and the average monthly interactions between advisors and authors (by interaction type) is shown in Table 18.



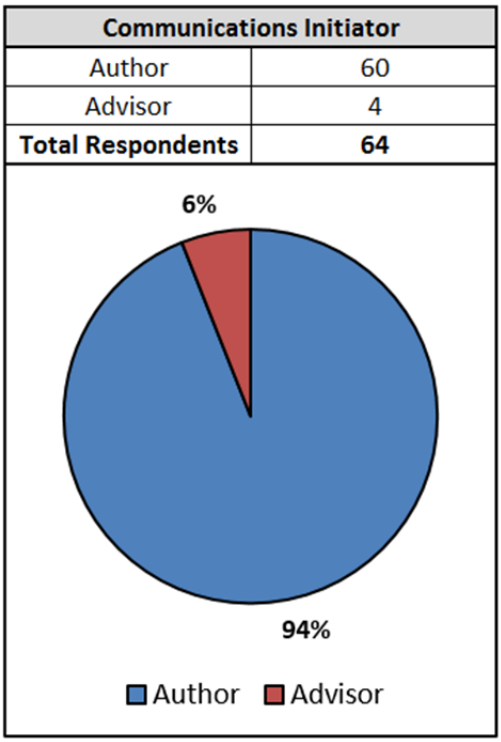
Student survey question No. 21 asked students the following question: Overall, how satisfied are you with the extent of interactions between you and your advisor?

Figure 28. Student Survey Question No. 21

Table 19. Average Monthly Interactions between Students and Advisors

Face-to-Face Meetings (Monthly)		**Email Exchanges (Monthly)**	
Mean	3.0	Mean	6.8
Median	3.0	Median	5.0
Mode	2.0	Mode	3.0
Standard Deviation	1.8	Standard Deviation	6.7
Minimum	1.0	Minimum	1.0
Maximum	10.0	Maximum	40.0
Range	9.0	Range	39.0
Count	65	Count	65

Survey respondents added that 94 percent of the time, communications between authors and advisors were initiated by the authors (see Figure 29).



Student survey question No. 18 asked students the following question: Typically, interactions between the project advisors and authors were initiated by.

Figure 29. Student Survey Question No. 18

(7) Advising Techniques and Procedures

Survey participants were asked to describe the advising methods, techniques, or procedures employed by their advisors that they found most effective while completing the capstone. From the survey responses, the project team identified the tools and techniques that students cited most often, which are listed below.

- Recurring face-to-face meetings between advisors and authors
- Capstone outlining
- Providing sample capstone products and templates to students
- Enforcing student deadlines

- Leveraging external networks (contacts) for research support

Students were also asked to describe the least effective advising methods, techniques, or procedures employed by their advisors. Some students listed specific advising tools and techniques in accordance with the question prompt; however, other students provided what might be considered "customer complaints" instead. Whether the student provided suggestions on advising techniques or provided advisor complaints, an aggregate of the most common themes are provided as follows.

- Advisor disengagement or disinterest in capstone outcomes
- Providing timely feedback, input and guidance to students
- Overreliance on email communications from advisor to authors
- Advisor's overall lack of structure or schedule enforcement

Capstone advisors may find these student recommendations for effective and ineffective advising strategies useful as they continuously refine their individual approaches to advising student research.

V. PHASE INTEGRATION AND CONCLUSIONS

A. CAPSTONE PROCESS DEFINED

The capstone is a student-driven process. The majority of students surveyed (73 percent) said that the process is entirely or mostly author-driven and advisors substantiated this finding during faculty interviews. Although the process is student-driven, students still have a clear expectation that their advisors will educate them on the process. This student expectation is evidenced in Figure 22, where the preponderance of students surveyed (27 percent) said that their "advisors" were their primary source for acquiring process knowledge. However, advisors themselves are less informed about the process and students must frequently resort to secondary sources for gathering information about capstone processes, usually through individual trial and error (20 percent) or GB4044 (14 percent). Although advisors are less informed about the capstone process, the majority of students (61 percent) said that their advisors provided a clear, discernable, and structured approach to guiding their capstones.

The majority of students also said that they obtained the knowledge, skills, and confidence to begin the capstone process during their fourth academic quarter or later. Statistics gathered from the new student survey are presented below.

- 3 in 4 students select and begin researching their topic during the fourth quarter or later
- 2 in 3 students select their advisors during the fourth quarter or later
- 7 in 8 students fully comprehend the capstone's structure and content during the fourth quarter or later

Advisors will usually agree to advise a capstone upon student request, so long as the topic fits within their area of expertise, the topic is relevant and distinguishable from previous research, and the advisor is not overly burdened with prior commitments. Presently, GSBPP full-time faculty members are advising about 2.8 capstones each year. In general, associate professors, assistant professors, senior lecturers, and lecturers are

each carrying an equal burden of capstone advisements (about three per year) while full professors are advising the least (about two per year).

B. CAPSTONE CONTENT DEFINED

Advisors evaluate capstone reports for content to determine when they are complete and ready for publishing. Typically, advisors ensure that finished capstones display strong logic and show that the authors have gained new knowledge. Advisors also rely heavily on their intuition and experience when determining if a completed capstone report is acceptable. Occasionally, some advisors will approve underdeveloped capstones if the student-author(s) are unable to improve their report further.

The majority of students surveyed said that they gained a full and complete understanding about the capstone's content requirements during the fourth and fifth academic quarters (77 percent); 11 percent did not obtain this knowledge until their sixth quarter. "Advisors" and "archived capstones" are the students' most important sources for obtaining content knowledge, according to survey responses (37 percent and 21 percent, respectively).

Based on an examination of 74 archived GSBPP capstones, most capstones have the following content features.

- 102 ± 9.8 pages
- Unfunded (97 percent)
- Unsponsored (84 percent)
- 1 – 2 authors (89 percent)
- 5 – 6 chapters (81 percent)
- 0 – 3 appendices (81 percent)

Additionally, the archived GSBPP capstones have general characteristics related to their actual content elements. More than half of the capstones had an introduction (100%), conclusion (100%), methodology (81%), recommendations (81%), background (76%), literature review (76%), recommendations for future research (64%), and analysis

sections (61%). Less than half of the capstones had interviews (12%), surveys (14%), a problem statement (18%), or scope (41%).

A clear limitation with the project team's study is that our findings do not capture or address the *quality* of student research, an area that we propose for future research later in Chapter V.

C. CAPSTONE VALUE DEFINED

The capstone has the potential to create value for (at least) four distinct populations: students, advisors, GSBPP, and DOD. Value to students is on a recent decline, with a downward trend in capstone favorability from 82 percent favorable in 2013 to 66 percent favorable in 2015. In the most recent 2016 survey of GSBPP students, only 38 percent of respondents said that the capstone is a valuable exercise, compared to 39 percent who said that the capstone is not valuable and 22 percent who are neutral. Moreover, only 34 percent of students believed that their capstones will be valuable to others in the future, an interesting statistic when considering that one of the capstone's main purposes is to aid the national defense by advancing future military service applications, as noted in Chapter I.

The heightened negative undertones which permeate student responses to the 2016 survey are likely attributable, at least in part, to the timing of the survey's release. Whereas the GSBPP exit survey is released to students after many have already completed the capstone (or are nearing the completion of it), the project team administered the new survey to sixth quarter students in the midst of completing their capstones. Thus, survey respondents were likely predisposed to viewing the capstone in a negative light given its urgency as a NPS graduation requirement. Future studies may want to consider administering the new survey to students (and GSBPP alumni) at different points along their degree progression in order to develop a more comprehensive assessment of the capstone's value to the student.

Faculty advisors believed that the capstone exercise does, in fact, add value to student learning even when the students themselves did not perceive the value added. Advisors also gained substantial, personal benefits from advising student research,

according to interview participants. Interviewees also believed that the capstone created value for DOD sponsors and for GSBPP as an institution; however, the project team did not solicit input from either of these sources directly. Hence, future project teams may choose to further develop the concepts of capstone value to DOD and to GSBPP itself.

D. THE EXISTING (AS-IS) GSBPP APPROACH TO FACILITATING STUDENT PROJECTS AND THESES

The project team set out to describe the existing GSBPP approach to facilitating student projects and theses for the purpose of assisting GSBPP with its continuous process improvement efforts. Based on the project team's research, the as-is state is as depicted in Figure 30. As shown in the figure, a student-driven process spans six (or in some cases, seven) academic quarters and results in a published capstone report with certain content characteristics. The completed capstone embodies varying degrees of value for different stakeholders; namely, value for the student, value for faculty advisors, value for GSBPP, and value for DOD.

Although students drive the process, major process steps still occur in the same general sequence. First, most students select a topic somewhere between the beginning of their third and the end of their fifth academic quarters. Nearly concurrently, most students choose an academic advisor(s) whom they believe are well-suited to guide their research. Advisors decide if they will (or will not) advise the student's capstone based on a "checklist" of important considerations: does the topic match the advisor's area of expertise? Is the topic original and relevant to others? And, is the advisor unburdened with prior commitments? Lastly, students execute the final process step of figuring out exactly what information they want (or need) to include in their capstone reports. For most students, this final step happens somewhere between the beginning of their fourth and the end of their sixth academic quarters. Throughout the process, students rely heavily upon their advisors for research support, guidance and direction. Students meet with their advisors face-to-face about three times each month, on average.

Once students have completed their final capstone drafts, faculty advisors utilize a separate "checklist" for determining if the capstone is acceptable and ready for

publishing: does the capstone display strong logic? Does it also display that the student(s) have acquired new knowledge? And, does the student have any time remaining to improve his or her capstone further? Figure 30 shows the principal content characteristics uncovered during the project team's review of 74 archived GSBPP capstones.

Finally, according to GSBPP faculty members interviewed by the project team, different stakeholders derive unique benefits from the capstone as shown in Figure 30. Of particular note, students have had a generally more favorable view of their capstone advisors when compared to their view of the capstone itself, based on responses gathered from the GSBPP exit survey administered between 2013 and 2015 (94 percent and 72 percent, respectfully).

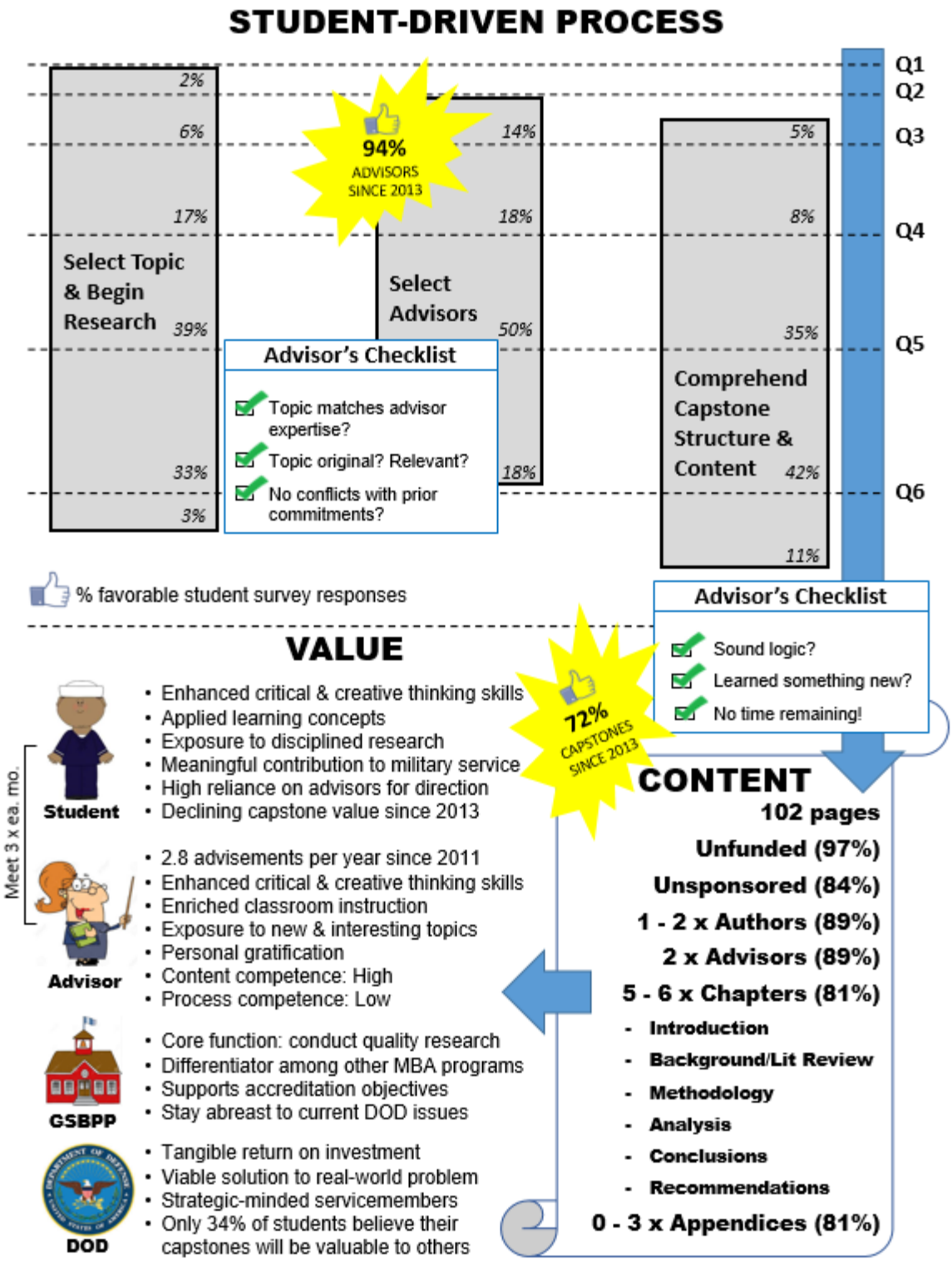


Figure 30. Existing (As-Is) GSBPP Approach to Facilitating Student Projects and Theses

E. RECOMMENDATIONS FOR FUTURE RESEARCH

The project team proposes the following recommendations for further research to expound upon our analysis, findings, and conclusions.

1. Survey GSBPP alumni at established time intervals following NPS graduation. The survey questions could be substantially the same as the ones the project team administered to students in their sixth academic quarter. This would allow for a comparative analysis of student perceptions regarding the capstone over time. The project team postulates that former GSBPP students will view the capstone more favorably as time progresses.
2. Develop new and/or use existing metrics to measure and analyze capstone quality. The project team reviewed 74 archived GSBPP capstones but were unable to draw meaningful conclusions with regards to quality. It would be very interesting to discover how completed capstones measure against objective standards of quality.
3. Determine the degree to which perceptions about capstone value and capstone processes vary relative to the capstone type (i.e., MBA professional report, Master's thesis, and joint applied project). The project team reviewed 74 archived GSBPP projects and theses and determined that capstone content is substantively equal between all three types. However, we were unable to draw meaningful conclusions about any variations in capstone value or capstone processes that might exist.
4. Assess the value and utility of capstones to DOD organizations that have previously sponsored student research. The project team would want to learn if sponsors have leveraged the capstone report by implementing recommendations and achieving (positive or negative) outcomes. The project team could easily match DOD activities to their sponsored capstones by referring to the SF 298, which is usually found on page i of published capstone reports.
5. Assess the level of interest within DOD organizations to sponsor, fund, or otherwise leverage GSBPP capstones. The project team would seek to discover if DOD activities are aware of the opportunity to obtain GSBPP student research, and if so, what considerations lead them to either pursue or discard it.
6. For the purposes of this report, the projected team only proceeded through the first three phases of the Plan, Do, Study, Act model. Theoretically, this report answers the existing "as-is" state of the GSBPP approach to facilitating student projects and theses. GSBPP may thus consider commissioning a separate research team to explore the desired "to-be" state (i.e., what GSBPP ought to do, or should do, about its present approaches to facilitating student projects and theses), which would encompass the "Act" phase of the PDSA model.

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APPENDIX A. GSBPP PEER AND ASPIRANT BUSINESS SCHOOLS REQUESTS FOR INFORMATION

Peer School Request	Aspirant School Request
From: Williams, Christopher (MAJ) **Subject:** MBA Thesis or Capstone Degree Requirements Good Afternoon, I would like to know if your full-time MBA program has a thesis, capstone or equivalent to meet the requirements of a MBA degree. The Naval Postgraduate School Graduate School of Business and Public Policy identifies your school as a peer school through the AACSB International accreditation. My MBA project team and I are collecting data on the as-is state of our MBA program and wanted to compare requirements such as a thesis, capstone course or project, or any substitutes and equivalency required for degree completion from schools similar to NPS. If you could provide information related to the specifics of those requirements, our team would greatly appreciate it. Thank you V/R MAJ Christopher M. Williams Student, Naval Postgraduate School Graduate School of Business and Public Policy	**From:** Williams, Christopher (MAJ) **Subject:** MBA Thesis or Capstone Degree Requirement Good Afternoon, I would like to know if your full-time MBA program has a thesis, capstone or equivalent to meet the requirements of a MBA degree. The Naval Postgraduate School Graduate School of Business and Public Policy identifies your school as an aspirant school through the AACSB International accreditation. My MBA project team and I are collecting data on the as-is state of our MBA program and wanted to compare requirements such as a thesis, capstone course or project, or any substitutes and equivalency required for degree completion from schools that provide developmental goals for NPS. If you could provide information related to the specifics of those requirements, our team would greatly appreciate it. Thank you V/R MAJ Christopher M. Williams Student, Naval Postgraduate School Graduate School of Business and Public Policy

School	Designation	Response Type	Response
Old Dominion University	Peer	Email	The ODU MBA does not have a thesis option. We have a capstone course instead, MGMT 621 – Business Policy and Strategy, 4 credit hours
Rensselaer Polytechnic Institute	Peer	N/A	No response via voice or email; Information acquired through school website.
Thunderbird School of Global Management	Peer	Email	Our program is not thesis-based, although we do have experiential project-based requirements to graduate – which can be completed by doing a consulting practicum (Thunderbird in Emerging Markets Laboratory), i.e. TEM Lab http://emergingmarketslab.thunderbird.edu/ ; OR through different simulation-based capstone courses such as FORAD, a corporate finance simulation, or other variations of client-facing consulting courses.
United States Air Force Academy	Peer	N/A	No Graduate Level program
Vanderbilt University	Peer	Email	Students are not required to complete a thesis or capstone in order to complete their MBA. There are, of course, final projects and exams for classes depending on the class. You may reach out to our Academic Programs team for further information regarding the courses and other requirements for MBA students.
Wayne State University	Peer	Voice	The only requirement is the capstone course BA 7080 (Strategic Management) that all MBA students must take.
Willamette University	Peer	N/A	No response via voice or email; Information acquired through school website.
College of William and Mary	Peer	Email	We do require a capstone course which is Global Competitive Strategy for graduation from our program. Candidates also engage in Field Consultancy for experiential learning in the 2nd year of their program. They need not write-up a thesis, however if a candidate wishes to produce scholarly research, faculty are always available to advise them through independent study, which is credit-bearing.
St. Joseph's University	Peer	Email	Yes, the MBA Program at the Haub School of Business has a capstone requirement; It's MGT 795.
University of California – Irvine	Aspirant	Voice	Our program does not require a thesis or capstone requirement. All MBA students must complete an internship from select companies within their field of interest, the summer before graduation.
University of California – Davis	Aspirant	N/A	No response via voice or email; Information confirmed through school website.
Dartmouth College	Aspirant	N/A	No response via voice or email; Information confirmed through school website.
University of Virginia (Darden)	Aspirant	Voice	A thesis or capstone is not required for completion of our program.
University of Rochester	Aspirant	Email	We require a two-quarter long consulting project where teams of 5 MBA students provide consulting services on a real issue faced by a corporation or other organization.

Figure 31. RFI School Responses

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APPENDIX B. THEMATIC ANALYSIS OF EXIT SURVEY COMMENTS

Table 20. Thematic Analysis of Exit Survey Comments

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
There is far too much emphasis placed on the MBA Project. This heavy emphasis would be understandable if it were a comprehensive assessment of all course concepts taught during the program. Instead, it is a subjective, time-consuming affair that subject to the satisfaction of project advisors. Sometimes it felt like advisors furthered their own academic pursuits through the work of graduate students. The program lacks standardization and expectations are often unclear. Because of the heavy emphasis on the MBA Project, students often forsake other course concepts to get the project done. I think that there should be assigned topics that cover all course concepts and more clear objectives for completion.	Content	-
Good opportunity to tie in all the course work and apply it to a problem set. Template editing was very time consuming and not worth the efforts I felt like. Also I think it would be beneficial to publicize the ongoing research at NPS so students can see topics that they may be interested in studying or contributing to.	Content	+
Perhaps for new students sometime between 1st and 3rd quarters, distribute a consolidated list of previous quarter theses/MBA projects that were good candidates for further thesis work, professors were still working on and could advise student projects. Specifically for the 816 curriculum, previous quarter acquisition specific projects distributed to 816 students to continue the research for their own project.	Content	N
What's the difference between an MBA project and a Thesis? I'm still trying to figure that out. Was not ever made clear. Recommend GSBPP either go all MBA projects all theses. Unnecessary complication.	Content	-

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
Why do we do this? If I am not being forced to work on a DOD sponsored project than why do I have to do a thesis? There is no rational I have heard to justify this requirement other than supporting the needs of the fleet - which isn't even required.	Content	-
From an academic perspective, I now appreciate the significance of credible research and its contributions to our military and society as a whole. From an NPS graduation requirement perspective, I would suggest moving the target thesis/project completion date to the end of 5th quarter so students can start the process a quarter earlier and not rush in the final quarter before graduation. There is too much competing requirements in the last quarter prior to graduation (thesis, PCS, classes, etc.).	Process	-
Have the students start working on their thesis earlier. If not working at least thinking about it and planning out a strategy for it.	Process	-
The thesis class doesn't help in the process much. It would also be nice if the instructors didn't tell you to wait till the middle of 4th quarter to start your thesis.	Process	-
Students are encouraged not to begin work until 4th quarter. Why? Why not start as early as possible.	Process	-
I felt the elective for research methods should be mandatory.	Process	N
I remain at a loss of what the MBA project requirement really achieves. I felt to better prepare us, the research papers that we were required to submit in various courses should have followed the project requirements more closely. I felt that the research papers did not prepare me for the requirements of the project requirements.	Process	-
I felt that my class did not receive guidance on the process early enough to make the best use of our time.	Process	-
I wish the curriculum spent more time on at the beginning of the program getting you prepared for such a difficult and time consuming task.	Process	-

Exit Survey Comment	Extracted Theme	Reaction (+, -, N)
Have mandatory deadlines	Process	-
It would be helpful to have a thesis class in quarter 2 or 3 and not have it as an elective. It was very hard to figure on my own what a thesis required. Also recommend MN 4110/4111 as a requirement for experience with multivariate analysis, before starting a thesis.	Process	N
Two primary recommendations: 1) Start GSBPP students earlier in their time at NPS. Per the brief (and instructors) we are not allowed to select a project until 4th quarter. This puts research starting 5th quarter and writing 6th quarter. With a 5 class course load in 5th quarter, it does not leave a lot of time to research, read and type especially with JPME classes requiring 50–100 pages of reading a night.2) Require all project groups to sign a contract for allotted responsibilities as part of the project proposal. This will help ensure each person carries their weight.	Process	-
It's somewhat difficult to get started on your project early as you're still learning the material and you're not sure what exactly you'll learn in the later quarters. So it should be expected that the bulk of the time and in the later quarters will be dedicated to the project.	Process	N
We are not exposed to acquisition subjects till fourth quarter and we have to select thesis topic and advisor at that time which at times makes it difficult to choose right topic and advisor.	Process	N
More guidance on the process. It felt very much like trial and error as to who needed what signatures and when we needed them as well as how the editing would go. There should be some single flow chart that helps explain the process.	Process	-
Discourage the "party line" that encourages students not to focus on their research projects until the 3rd and 4th quarter. Get them thinking about their topic, advisors, partners and proposals ASAP.	Process	-
The proposal process is extremely challenging. There is no formal guidance and varies per instructor.	Process	-

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
At the beginning of the process the MBA project/thesis proposal process and IRB process were not well explained or defined. A brief meeting during 3rd or 4th quarter to familiarize students with the process and answer questions would be beneficial.	Process	-
I had a great experience with the thesis processing, especially with ARP. I would recommend ensuring that all students have the thesis briefing during 3rd quarter or add the thesis template to the resources provided by ARP so that students utilize this template from the beginning stages of writing.	Process	+
IRB process needs to be briefed in detail during the 3rd quarter by the IRB staff. Students must be made aware that this process may take up to 45 days.	Process	-
GSBPP does not support theses like other schools. Other schools get prep courses that teach how to go about approaching research. We are handicapped because the business school does not take theses seriously. Fix or eliminate.	Process	-
I found the IRB process to be ridiculous. Because we were conducting interviews about a process, we had to go through the IRB channel. Later, to find out that the surveys were conducted in Survey Monkey, a tool that anyone that was conducting a survey can view or attain access to our information. This alone negated the entire IRB process and violated the subject's confidentiality and privacy.	Process	-
The MBA Project is fine as a capstone experience for students. However, there are too many entities to whom students must provide deliverables (thesis processing office, advisors, ARP), and these entities are not standardized in the format and content they want to see from students. This makes the process unnecessarily challenging for students. Further, the computer program and formatting requirements students must use to coordinate with the thesis processing office is not user friendly.	Process	-

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
Students should be briefed on the thesis process in the first or second quarter. I understand the logic of waiting until later, but it takes away valuable time from the students. Students should be given the opportunity to manage their time as they see fit. As it stand now, we must wait until the 4th quarter to get any sort of guidance. Also, there should be a GSBPP website outlining the thesis process. The NPS website does not outline the requirements of GSBPP and no one person really knows the requirements. The "process" differs between professors. The website should include what signatures are required, who is filling the billets within GSBPP, and templates of all required forms. Currently, students have to figure the process out for themselves.	Process	-
Starting early, taking GB4044, and being accepted to the ARP program were key to success.	Process	+
I had a hard time finding a relevant topic. I think instructors should push students to find a topic early.	Process	-
Discuss and request signed proposals sooner.	Process	-
Additional time should be built into the schedule to complete. 18 months is already compressed.	Process	-
I think professors need to advertise better potential projects that students could work on. It's difficult from a student's perspective to know where to go for a possible project, especially from a professor that the student may not have had in class.	Process	-
More involvement from faculty in helping students select topic early.	Process	-
Lots of discovery learning here, which was great. The hardest parts were finding a topic and getting the right data. The former being what most of my classmates struggled with. What made it easy for my partner and I was that someone from outside NPS came here looking for someone to do research for his organization. This gave us a topic and gave us immediate buy-in as our findings directly affected an ACAT IV level program.	Process	N
The start of working on the thesis should be triggered in the 3 quarter	Process	-

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
Provide a better explanation of what is required for students.	Process	-
Force thesis topic identification in third quarter, lock in advisors by fourth, and keep GB 4044.	Process	N
The MBA Project process was very good for me. Our advisor faculty members were very encouraging and helpful throughout the process. The thesis processing office also did great work. My biggest challenge was managing controversy and work equity within my MBA Project team.	Process	+
I would recommend a brief up front to students to outline the process, rather than simply focusing on threatening students regarding plagiarism. That was insulting and not very helpful.	Process	-
By the second quarter, I would have liked a list of current professors and their research. This list would have assisted me in finding an adviser; instead, it took an entire quarter to find the appropriate adviser.	Process	-
An advisor should also be responsible for the ARP timeline as established in the ARP application. We had issues in completing our project because the advisor had many last minute changes that weren't necessary.	Process	-
I tried to stay ahead with my thesis, but at the end was derailed by my adviser who took his time getting me my feedback although we met weekly throughout the two quarters.	Process	-
Delays in feedback from Project advisors were very annoying. I would've been hammered back in the fleet for the delays that seemed normal here.	Process	-

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
There seems to be no established standard for advisors to follow for ensuring students meet the MBA Project timeline. Some advisors have quick turnaround for comments/feedback and are consistent with guidance/ suggestions for change. However, others are the exact opposite and are not user friendly for students. Thus, putting students through unnecessary stress at the last minute when consistent and timely guidance at the beginning and throughout the entire project could have occurred. Additionally, taking extra acquisition courses in place of the MBA project would be more beneficial. This would provide a greater depth of acquisition knowledge and even financial management courses that there is not room to take in the current schedule.	Process	-
The MBA Project takes up a lot of time to do adequately. FM people were TOLD DO NOT start project until after Conrad selections. This put people a few steps behind. That statement should not be put out in that fashion. Also, 1st quarter was too easy then quarters 3, 4, and 5 were very time consuming. There is no reason not to move a S&W to quarter 1, and then move TSDM to quarter 4, and JMO I&II to quarter 5 and 6 (only to ensure 12 hours for last quarter, or if that is not the concern, move them to Quarter 4&5). This would allow more time to work and do solid research especially for those sponsored projects. The project is an interesting exercise in academia (faculty are amazing), but in reality, not sure of the true value for most projects. I would recommend getting rid of the project requirement and shortening up the program from 6 to 5 quarters. This may be difficult for based on the politics of "research brings money to NPS to justify budget." Value added for research in many other program (Oceanography, Eng, IS, or SE) is very real, but on the business side, difficult. DOD does not operate as a business and most of the classes do not apply to DOD practices.	Value	-

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
Very tedious process and a lot of hard work that we see no apparent benefit to our experience/degree.	Value	-
The MBA Project/thesis forces a student to apply some skills learned during the program. I feel more would be gained from additional classes. Research can still be conducted through a research assistant course with professor sponsored projects.	Value	-
Overall I would rate my experience as excellent. Were deficiencies exist it was normally the fault of the professor not the curriculum.	Value	+
It's a good idea in theory, but with our class workload, everyone is just going to work to get the thesis done and check the box. No one is going to put any more effort into the thesis than is necessary. I know we have less classes to accommodate for the thesis, but it's not enough. The thesis will always take a back seat to my course work.	Value	-
It does not seem to matter except in a few instances where it is beneficial to a professor's research. I gained nothing from it.	Value	-
Great program; I have no constructive changes.	Value	+
Don't really understand the purpose of the Thesis. The project I am working on is interesting, and I have learned a few things, but it is extremely time consuming, and I fail to see the benefit for the amount of time that is required.	Value	-
After completing the requirement, I am still uncertain if there was any real value added. In fact, I could argue that the requirement had somewhat forced me to put forth less of an effort in my core MBA courses starting in my 4th quarter. I would prefer additional classes added to the curriculum rather than the MBA Thesis/Project requirement. I feel the additional classes would provide more benefit than the thesis requirement.	Value	-
It was good experience.	Value	+
Great experience to dive deep into a topic.	Value	+
Great support and experience. No suggestions!	Value	+

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
The project provided an opportunity to work on an issue that had to be structured, researched, analyzed and presented in a way to effectively communicate results. The beginning to end process was beneficial.	Value	+
The MBA Thesis allowed me to contemplate the skills I gained, find an area of interest to study, and apply my new tools on a project. The MBA Thesis added value to my education.	Value	+
This was an excellent opportunity to apply lessons learned throughout our time at NPS.	Value	+
Great experience! I thoroughly enjoyed it because of my interest in the topic and the advisors willingness to advise me on the constructs identified as pertinent to the work. Starting out isn't very structured, but I think that is the point of the capstone project/thesis. What would be nice is a "closing session" telling me what I was supposed to get from it so I know if I missed anything. Just getting the green card and then hearing nothing else about the work is a little disheartening, but the requirements were met and now it's on to the next thing.	Value	+
Very applicable requirement that stresses real world application of educational undertakings.	Value	+
This turned out to help me learn the most. I completed it mostly on my own. My advisors did guide me, but I learned a lot. The accounting classes did provide me a good basis to complete this project. This was difficult, but the outcome was worth it.	Value	+
It was a rewarding experience and enabled me to further my critical thinking abilities.	Value	+

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
a good learning experience to conduct research .	Value	+
A waste of time. I came here to get a degree, not to advance the institution by doing research work that only benefits the school. I did not benefit from doing an MBA project. My advisors were great though.	Value	-
I don't believe the MBA project is value-added for me as a student. I understand that there are other reasons why it exists at NPS.	Value	-
The MBA project was very challenging. I learned so much and I loved every minute of it.	Value	+
The MBA project was a very educational experience.	Value	+
I had a great experience (research, analysis, writing, and advisor interaction) once my team was able to navigate our way through the admin portion. IRB was unnecessarily painful. ARP was a GREAT resource also.	Value	+
The experience was great. I highly recommend you keep this in the curriculum.	Value	+
As long as we have so many classes towards the end of the program, the thesis work will always be put on the back burner. More time and energy would be spent on creating a better thesis if I had less classes towards the end of the program. I would even have front loaded my courses early to have less classes at the end	Value	-
Eventually it was a good and helpful experience that provide me with self-satisfaction. However, the emphasis it receives from the very start of the program adds a lot of stress on students.	Value	+
This was a very good experience.	Value	+
No major suggestions to offer. It was a worthwhile learning experience.	Value	+
We made MBA project. It was a good experience.	Value	+

Exit Survey Comment	Extracted Theme	Reaction (+, N, -)
It was beneficial to partake in the thesis process, particularly the discussions with advisors and stakeholders in examining a complex problem.	Value	+
Worthwhile experience but would not want to do it again.	Value	+
The MBA project breakdown of effort was 20% actual research, 80% format. This unfortunately led to a product that was not as good as it could have been.	Value	-

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APPENDIX C. FACULTY INTERVIEW LINEAR PROGRAMMING MODEL

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Objective: MINIMIZE	1	1	1	1	0	0	0	1	1	1	1	0	1	0	1	0
	AA	AAA	BB	BBB	C	CC	D	DD	DDD	E	EE	F	G	GG	H	HH
Advisement Data																
Average number of projects per year HIGH		1				1			1			1	1		1	
Average number of projects per year LOW	1		1	1	1		1	1		1	1			1		1
Academic Area																
Acquisition Management													1			
Financial Management	1							1		1						1
Management		1	1	1	1											
Manpower and Economics							1					1		1	1	
Operations and Logistics						1			1		1					
Title																
Assistant Professor								1							1	
Associate Professor	1	1		1	1							1		1		
Lecturer						1				1						
Professor			1								1					1
Senior Lecturer							1		1				1			
Tenure Status																
Non-Tenure Track						1	1	1	1	1			1			
Tenured	1	1	1		1						1	1				1
Tenure-Track				1										1	1	
All variables																

A	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Objective: MINIMIZE	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
	II	J	JJ	K	KK	L	LL	M	MM	N	NN	O	OO	P	PP	Q	QQ	R
Advisement Data																		
Average number of projects per year HIGH								1		1	1		1		1		1	1
Average number of projects per year LOW	1	1	1	1	1	1	1		1			1		1		1		
Academic Area																		
Acquisition Management					1					1				1		1	1	1
Financial Management		1		1		1			1									
Management			1															
Manpower and Economics	1							1			1	1			1			
Operations and Logistics							1						1					
Title																		
Assistant Professor	1						1				1							
Associate Professor		1	1	1									1				1	
Lecturer					1			1										
Professor						1						1			1			
Senior Lecturer									1	1				1		1		1
Tenure Status																		
Non-Tenure Track					1			1	1	1				1		1		1
Tenured			1			1						1	1		1		1	
Tenure-Track	1	1		1			1				1							
All variables																		

A	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ
	1	1	1	1	1	1	1	1	1	1	1	1	1				
Objective: MINIMIZE	0	0	0	0	0	0	0	0	0	0	0	0	12	interviewees			
	RR	S	T	TT	U	W	WW	X	XX	Y	Z	ZZ					
Advisement Data																	
Average number of projects per year HIGH							1	1		1	1	1	6	=	6	interviewees	
Average number of projects per year LOW	1	1	1	1	1	1			1				6	=	6	interviewees	
Academic Area																	
Acquisition Management	1												2	≥	2	interviewees	
Financial Management			1			1				1			3	≥	2	interviewees	
Management				1	1								3	≥	2	interviewees	
Manpower and Economics		1							1		1	1	2	≥	2	interviewees	
Operations and Logistics							1	1					2	≥	2	interviewees	
Title																	
Assistant Professor													2	≥	2	interviewees	
Associate Professor		1		1	1			1				1	3	≥	2	interviewees	
Lecturer						1							2	≥	2	interviewees	
Professor							1		1				2	≥	2	interviewees	
Senior Lecturer	1		1							1	1		3	≥	2	interviewees	
Tenure Status																	
Non-Tenure Track	1		1			1				1	1		6	≥	2	interviewees	
Tenured				1	1		1	1	1			1	4	≥	2	interviewees	
Tenure-Track		1											2	≥	2	interviewees	
All variables																	
														=	0 or 1		

Designator	AA	AAA	BB	BBB	C	CC	D	DD	DDD
Variable	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise
	DDD	E	EE	F	G	GG	H	HH	II
	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise
	J	JJ	K	KK	L	LL	M	MM	N
	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise
	NN	O	OO	P	PP	Q	QQ	R	RR
	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise
	S	T	TT	U	W	WW	X	XX	Y
	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise	1 select; 0 otherwise
	Z	ZZ							
	1 select; 0 otherwise	1 select; 0 otherwise							

Figure 32. Faculty Interview Linear Programming Model

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APPENDIX D. FACULTY INTERVIEW NOTES

Table 21. Faculty Interview Notes

No.	Questions	Theme
01	Assess the value of the existing GSBPP project/thesis exercise as a part of the GSBPP curriculum. How do you perceive the value of the exercise to the students? How do you perceive the value of the exercise to the business school (for example, most/least valuable aspects)?	Value

1. One of the things that is unique is the thesis requirement, sets us apart from other institutions, the magical value is that when the student, the advisor and the navy work on one product. One of the issues is the end product, the sponsors only wants certain things. The magic happens when you can get alignment, but certain times you can't get it with the Navy. That is the value to the stakeholder. There are three main sources of value that come from completion of the capstone project: 1) the end product of the capstone project (the capstone report), 2) the analysis resulting from the capstone project that the sponsor desires, and 3) what the student learns by competing the capstone project process by going from A to Z. The capstone project report may not be of best quality but this doesn't reflect the level of experience received by the student from going through the process. Students are at different places when they come into the process of the thesis. Time dimension is a challenge: academia and business people do not trust each other; this changes over time. Things may not align now with a sponsor but five years from now it could work; research leads application.
2. Very much a value, it becomes a tool to get commands to say yes from their investment in the program. The client has a say in what the students will do. The product may not be useful to the school, but students gain valuable benefits.
3. Yes, there is value to the student in doing a thesis as part of a master's degree program. A thesis is associated with a graduate degree. There is value to the school because a thesis requirement comes with being accredited. There is more value to the customer (sponsor) for NPS to have a project associated with the curriculum. This is the return on investment from the research side. The services are already losing us for two years so they get value on having us complete a research project. There is value in focused research on DOD relevant topics with a sponsor tied to it. Sponsors can spend money to have students research their problems. If the project is not tied to a customer, then it shouldn't be considered. Require customer engagement; provide a list of issues and be available for the

student to debrief. There is value in face to face interactions with decision makers; this is a good experience for students.

4. Very few schools across the country have a thesis in the MBA, I think NPS has a beneficial effect for the services to tackle a problem. The resources should have an impact. There is value to the student for looking at what they have learned and applying them in the project. Being able to pull different types of knowledge base into a project whether case, project or thesis. Benefit to NPS is the academic reputation by students and professors working together to publish research. Thesis project helps faculty keep tools sharp to assist with publishing which helps with accreditation.
5. Two angles: Is there larger value to the Navy in theory, some of these project are not just an academic exercise, they could result in changes in methodology, or change that the Navy could put in place. The benefit to the school and the student, not every master's degree program requires a thesis. Benefit to the student to going through the exercise, any one class may have one writing project, but it doesn't have the magnitude that the thesis project does. I am sure there is benefit to the business school to put students through this rigor. Other than the course, accreditation lends weight to the program. If students make it to fifth quarter they will finish the program.
6. It's working really well, students take so many classes that the quarter system does not lend itself to deep knowledge because it's over before it starts. Therefore, it's an unprecedented event for the students.
7. Especially for the student, intro in discipline type research starting with informed type of foundation. Most students don't get this before the thesis or capstone it provides access to the valuable research. Some of the products that come of the process are very good.
8. The value is very high to the students and the school. To the student who does real serious independent work, in graduate school you are doer and thinkers, that is very useful tool. To the school, sends a message to department of the navy leaders that students are capable of merging textbook logic and real world problems. For the school it shows the relevance of the mission because this is not just any civilian institution. The importance of this can never be overstated.
9. I do see value, our way to work with real problems and sponsors. It is value to students to apply what they learn and bring it all together to solve a real world problems, for the school its keeps us in touch with the real world.
10. The project is incredibly valuable tool and has several valuable dimensions to it. Students have not done higher level research and so here is the project that is teaching methodology and higher levels of critical thinking and replicate that within higher positions back within the services. Level 2 is that the research is real problems that need real world

solutions. We are using practitioner based research that can solve real problems. It lends credential to the advisors on the projects that lead in to publications and journals, presentations at symposiums. It improves the research premise of the school that involves not only instruction but quality research.

11. It allows students to apply all or most of the concepts they learned during the graduate program.
12. It allows the business school to show the knowledge level acquired by students.

No.	Questions	Theme
02	What is your understanding of project/thesis process requirements? Do you feel like you know what you need to know to advise students?	Process

1. Yes I have advised 70 thesis. When you have done that many you understand the process. Junior faculty should work with senior faculty to learn what the process looks like. Thesis are different, some are messy, based on the advisor. There are times when I need to do a rescue thesis, where you are in the 4th quarter and the data is not coming in but you need to be complete by sixth qtr.
2. Yes, by advising as second reader as a junior faculty I have learned the process. Otherwise I would have to study up more.
3. Yes, I am familiar with the beginning, end, and big blocks in between. Experience was key; I also had checklists and talked to people. Students run the schedule. I expect them to use the reverse planning process for the project. It is up to the student to get it done. I do not review multiple drafts, only two complete drafts. I want to see the problem statement and table of contents (framework) first. The thesis teaches you how to do research. There is a method to doing research. This method ensures that the academic community understands your work.
4. There are thesis standardized documents that available. I personally look at content but often have to refer back to document templates for the process.
5. When I had much more student interaction, until I changed positions. I did not know the requirements after being here a year and a half. Then providing briefings to incoming students. There was a perception among students and worrying about the project in the 1st quarter, but my philosophy was don't worry until 4th quarter. I received a pass down folder that gave me all the details which I did not get as a new faculty member. There is no manual for advising students. I became a second reader through on the job training by following the lead advisor. I had to use my own logic to figure out how to provide feedback.

6. I think every faculty treats it differently and has different levels of quality. I have no idea whether it's different with each student.
7. I understand the process. It has been a constant evolving beast, at one point it was simpler and then we added different products, then the human subjects research and the compliance, the modification of proposals, data and reporting. We added it in the anti-plagiarism and turn it in check. A new advisor needs to learn the process on the front end, the back end is covered by TPO.
8. The student is in the driver seat, they must stay on top of the procedures. My job is to provide expertise and not procedural points. I know the general process and idea.
9. Yes, the ability to find the requirements or know about a changed has fluxed. Different curriculums were having their own Sakai site with outdated information.
10. The process and lay out the chapter and strategic research, I am very good. I am weaker at the mastery of the administrative process which changes every six months.
11. I learned the requirements by talking to senior professors with many years of experience.
12. Yes, very well. I have successfully advised around 20 theses/projects in 5 years.

No.	Questions	Theme
03	What is your understanding of project/thesis content requirements? Do you feel like you know what you need to know to advise students?	Content

1. I know what I am looking for. I have a particular way or format that I prefer. NPS traditional format is not one that I follow. If you do not have an executive summary then you don't get the reader's attention. I want the recommendations right at the beginning.
2. Yes; it's been a function of experience both at NPS and elsewhere.
3. I look at a first full draft of the project with the exception of the conclusion and recommendations. I then look at another final draft of the project before it goes off to editing.
4. I am comfortable with the content. I am experienced enough to understand the content and see myself as a content advisor.
5. We don't mandate that students write the project on a curriculum topic (or their degree specialty). I'm not sure what they do in other curriculums.
6. If the thesis has good logical flow then I am good to go.
7. I wrote one of the handbooks that I get students to use about analysis planning. I focus on the analysis planning and then going back and getting

the data. I put together a SAKAI website for my students to receive information and templates.

8. Yes this is relevant to me. The rigor and relevance is my job to ensure quality.
9. Yes; I know what I expect and the cookie cutter model and the average theses at NPS through working with faculty who are involved in extensive research.
10. Yes, most of it was OJT and reading, some of it was mentorship. My time as a student was also beneficial learning the methodology and rigor of the project.
11. I learned these requirements in the same way as in question 2.

No.	Questions	Theme
04	For projects/theses that are sponsored by an external organization(s), explain your role (if any) in reporting sponsorship status to GSBPP and NPS leadership. Do you help to fill out the Standard Form 298, Block 9 (see pg. 2)? Do you feel that this data point is important for the business school to collect?	Process

1. NPS leadership cannot know enough about what the NPS students are doing. Own leadership does not know about what students are doing…..There is not a mechanism to report sponsorship.
2. No I do not. I do not see how it will benefit the school.
3. We should be getting sponsors that offer funding as much as possible.
4. Sponsors help discipline the topics.
5. I have not been on an external sponsored project.
6. No requirement for that. I don't see a need for NPS to collect that information.
7. I sure do. In the template that I use for the Joint Applied Project, it gets reported in that plan. I think it's important in understanding the level of sponsorship involved.
8. This is not applicable to me, but it should be important to the school. With more sponsor projects that shows we are responding to a need.
9. Yes it important to collect and report. I do not have a lot of sponsored research because of my role and position in the department as a senior lecturer.
10. I do not conduct formal research. For the research that I conduct I make sure the research is valid, and a strong obligation to make the research work. I do not think that passing that to the dean is within his level of attention. If there is a link to the sponsor and business school, then that feedback should be reported to the school.
11. I have never done this. I don't remember doing this. I can't answer.

No.	Questions	Theme
05	For projects/theses that are funded by an external organization(s), explain your role (if any) in reporting funding status to GSBPP and NPS leadership. Do you help to fill out the Standard Form 298, Block 5 (see pg. 2)? Do you feel that this data point is important for the business school to collect?	Process

1. Not reflected in the assessment tool. But the assessment tool would be able to capture the flash point.
2. No it is not important. It would be a bad thing to report it because people would interject themselves in the process.
3. It does not need to be recorded because it is vetted even before it gets to the professor.
4. I never advised on a funded project.
5. No requirement.
6. That funding is reimbursable funding and it's got to be manage like a reimbursable account. Important to make sure all the accounts are covered and the money is reimbursed.
7. I don't get much funded research because I can't.
8. My projects are generally funded by ARP. If my projects are funded then I do have a sense of obligation to report.

No.	Questions	Theme
06	What is your approach to advising? Is your approach the same for every student (student team)? What factors (if any) cause you to alter your advisement strategy?	Process

1. A lot depends on the student coming into the capstone project with interest. There are three different approaches where students and faculty come together to work on a capstone project: 1) A faculty member with a sponsor find a student and work the student on the project (this is the worst case scenario because the student isn't interested in the work), 2) the faculty member takes what the student is interested in and advises them on that topic (this will be a really good scenario because the student is interested and it will be fun), and 3) the best scenario is when the faculty member, sponsor, and student come together and are excited about the project.
2. My advisement is to give people there heads (let them do their thing) and keep them inbounds as their advisor. If they get out of bounds I tell them they will not graduate to get them inbounds. Complete the first chapter last. I prefer to revise chapters and not the entire product. Corrections are easier to make chapter by chapter. Complete the background and literature

review first. This demonstrates that the student knows what they are doing. Then complete the experimental design and methodology.

3. I will advise any student as long as the topic is important and it is research. I cannot remember ever declining a request.
4. I have a discussion with the student, what are your goals and so I try to narrow the scope of the project. Identify the data, source and timing. Students provide me chapter information then I mark it up and then return it. Multiple reviews. My process does not change.
5. I try to take the same approach, then you start seeing the proposal and the drafts, some students get it but if I get someone whose writings skills…I have to be more hands on. My approach is try to as I am reading the early work try to figure out if they need help in writing…should I send then to the writing center or help them with sentence structure. It's the student's project and I try to let them go and I want to be hands off but also a resource.
6. It's different for each student. I tend to work closely with the students.
7. I start with putting together a proposal plan then the getting into the analysis planning handbook and using the matrix. If done correctly the scope comes out correct, the data it really helps the process.
8. My approach is tailored. For some students I am very hands on. The guiding principle is the same but it depends on the expertise, rigor.
9. I do what needs to be done depending on my role as the lead adviser or secondary adviser. I use a specific thesis process to standardize but I am willing to adapt depending on whom I am working with.
10. I go through the process and I am very selective about my teams, I look for motivation and heart felt desire to what they are proposing. I engage the students to make sure I am interested and look for a connection. Different teams require different requirements from me, do they understand the 5 chapter content. Some teams require my expertise in a specific area. I think the level of engagement is what they are bringing into the project and what they need from me. Teach them how to do it and create a product that is useful for sponsors and the body of knowledge.
11. I let them choose the topic they want as long as it has not been done. Then I help them with the execution of the different chapters of the thesis/ project.

No.	Questions	Theme
07	What criteria do you use to determine if you will (or will not) advise a project/thesis?	Process

1. If it is not in my area, you probably should find someone else, or if students are not enthusiastic. I also come to a point where I can't take on anymore.

2. The topic has to be of interest to me and inside my area of expertise.
3. Do I have the time available? I have had to tell students no because of time constraints. I need to feel like I can add some value to the topic as a primary or secondary reader. Do I know something about the topic? Does it flow logically or make sense.
4. My background determines whether I take on a project.
5. If it's a topic I know something about, I ask is there a way I can help, especially with case studies. If the student presents a topic I do not know anything about I will not advise.
6. It is rare for me to turn down a student.
7. Is it a good topic for me, does it fit within my area of expertise? I may tailor or expand the topic to a more meaningful or relevant topic.
8. What do the students need me to do, content knowledge, cyber or supply? Do they need to me to provide methodological analysis? Do they need process knowledge? What is my workload and the timing of the projects?
9. The students have to be motivated. They must have enough lead time for doing the project. It has to be a topic that enrich the student and contribute to the body of knowledge. I look for the new innovative approach that will solve problems or dilemmas not a regurgitation of previous work. It has to have relevancy to the DOD or the business school. Basic adherence to published and unpublished guidance, less than three members of a team. Students should be equally paired up and have the right mix of capabilities. Are they bringing the necessary skillsets? What other advisors are they looking to team up with? I require very specific targets within the proposal of when things will get done.
10. I never reject a request to help students.

No.	Questions	Theme
08	Have you ever declined a request to advise a project or thesis? Why or why not?	Process

1. Yes, I have probably declined one per year. I usually advise about five per year.
2. Yes; if project does not fall within my expertise I question why they are coming to me; probably but cannot recall
3. Yes, because of time constraints or my plate is too full.
4. I have never said no but if the project topic is not in my field then I will lead them to a different advisor who is more a subject matter expert.
5. Yes if I do not know anything about the project or thesis topic.
6. Maybe two or three times if I was loaded.
7. I have not declined because students do their homework before approaching me.

8. I typically just redirect the students to the appropriate advisor.
9. Yes, if I am overloaded. Is it within my area of expertise and capability? I don't take topics that are too easy.

No.	Questions	Theme
09	How do you determine if a project or thesis is ready and acceptable for publishing with Dudley Knox Library?	Content

1. They are running out of time. You could always continue to work on a thesis. I push people much harder if I think there is more work to be done. Most of the work in thesis comes from two ways, the upfront research, planning. The other kind is bringing thesis up to quality standards because you are at the end point.
2. My editing experience plays a big role and if it passes the muster then I know it is ready. I try to keep it tight. Read the theses and ask questions and if student can't answer questions then there is a problem.
3. The student fills in the discussion and data analysis up to the discussion. Recommendations and conclusion are the easy parts.
4. I know it when I see it. Have the students met the objectives. If the student is not able to get data then it changes the thought on what is acceptable.
5. Usually I get draft chapters and I make comments and send it back. Unless there is a lot of markups then I don't see it again until comes back entirely. I try read it from cover to cover to see if it makes sense and the writing sounds like the student is an educated person. If the writing is tight and logical then I think it is ready for writing editor or processing. I am an advisor not a co-writer so it is not my job to make sure it is 100% on grammar, it's going to the editor but I am not a proof reader of the student's product.
6. If it has a good logical flow and the arguments are supported.
7. It's got to be a complete product; the conclusion and recommendations needs to flow right out of the analyses; making sure students understand the unbiased approached of data.
8. Must show rigor as graduate level work and evidence supporting the argument. It's only a couple months work.
9. It has to tell the minimally acceptable story that shows that the student has gotten smart. It doesn't have to be rock star but must show some sort of instruction and rigor. That the student has thought through the material. My default is to make sure the students graduate. I know what is good enough.
10. I require detailed outline, thought and methodical about reviewing chapters. I like chapters to be fed to me. I look at the original outline and intent and make sure it meets that. The content must be sufficient and did the student use the correct framework and conduct analysis.

11. If I read it and I think it's done, I tell the student it's finished and he/she can publish it.

No.	Questions	Theme
10	How does advising projects/theses benefit you personally or professionally?	Value

1. Great experience; you get to really know students and build relationships with them. You get to work through the ups and downs of the capstone project process and get the student through the process. I get to learn more about topics I didn't know much about.
2. If it is a funded project, I benefit from the students answering the questions that need to be answered. Two of my capstone projects that I advised have been published. This goes on my scoreboard as a professor.
3. I get to work with students. It helps me to refine my research thinking by going over the projects with students.
4. Benefits me academically by learning about the defense industry and DOD. I have published papers that otherwise I would not have had the ability to without students and being here at NPS.
5. I think there is a benefit in seeing ideas coming from students, I teach a certain number of classes and I am relying on certain sources. Exposure to other ideas helps me broaden my horizon in thinking about a problem.
6. I get to know the students better; classroom is very formal and I get to learn a lot about a topic.
7. Both, one you getting access to the research that students are doing subjects that important to the DOD, or international. I get educated on new trends, policies and what is important to different countries. I am receiving cutting edge information and helps to stay fresh and current.
8. I enjoy it. It makes me feel satisfactory that students are learning and completing a problem. I learn from the project and it adds value both professionally and personally.
9. It's more practice at advising, more information for me to use in my class. It gives me a little more knowledge and keeps me closer to the field.
10. Personally I love helping students. I enjoy the opportunity to work with students and helping interact.
11. It does both because I am very selective about the topics I pick. I must have that connection and personally it allows me to sharpen my skills and stay current. Students bring me topics that I did not even know existed. I am learning constantly and it enriches me and I build on it for class materials, publications, and policy. I enjoy what I do and the students.
12. It makes me think about topics that are not in my main line of research.

No.	Questions	Theme
11	How does advising projects/theses benefit you personally or professionally?	Value

1. It is not a burden at all; it is part of my responsibility to help students get the capstone project out the door and it's the student's project, not mine. My job as a faculty to try to get a good thesis from students. My job is to help and encourage you to get the best thesis you can. You get to learn a lot from students working on theses. It's a benefit to me as the advisor and the students. I learn about topics that I otherwise would not learn about.
2. At the end of the quarter they can get time consuming because students want to finish. Students that don't understand it's a back and forth process of revising. They expect to turn it in once and be done with it. This can be a burden. Thesis are not term papers and are not one submission.
3. No burden.
4. The time investment is a significant factor. If papers are not written well, it takes time and it is a non-value added process (effort I shouldn't have to spend).
5. I have never had so many projects that it has become a burden, it does take time but not a burden.
6. Yes, some students are pretty terrible writers and it's hard to read. The timeline is sometimes an inconvenience, students have a pretty interesting topic, questions, research and they don't have time to really complete it the way I think they could.
7. Just the time.
8. The major cost is time, but this is part of my mission to advise students.
9. The time commitment and the reading through theses can occasionally be a drag for final publication.
10. My allocation of time and the workload for teaching and advising student projects. Current compensation workload agreement disincentivizes taking on more projects. When you look at the number of students and the school guidance on advisement load, it won't cover the amount of the students coming through the department. It doesn't work especially if there faculty who are advising zero students. If the projects are of value then the compensation model for faculty does not reflect that value.
11. I haven't felt that so far.

No.	Questions	Theme
12	Do you have a target number (or range) of projects/theses that you want to advise over a given period? Why is this target (or range) important to you? What major factors promote (or constrain) your ability to advise more (or less) projects?	Process

1. I usually stick around five. I tried advising seven projects before and it turned out to be too many. Seven to eight is my ceiling. The constraints are the time and effort it takes to advise a capstone project from start to finish.
2. The average graduate to advisor is 2.83 per year. If every faculty member advised the average per year every student would have an advisor. If some faculty advise above the average, it is harder for other faculty members to find students to advise. Funding means students are doing most of the work. Unfunded capstone projects takes time away from writing articles and preparing for class. People advising more than the average (2.83) should explain if it's funded or unfunded research. Four to five a quarter is my ceiling.
3. I do not have a target. There are no factors that constrain. I can always find time.
4. Three to Four max at the same time. Time constraint due to different job responsibilities. Administration takes more time to learn because it's new to me.
5. Not a personal target but as a faculty member I am expected to teach, give service on a committee to serve the university and then advise. They do not really say you need to advise a certain a number over a certain time. You are just expected to be an advisor. My advising activity has fallen.
6. I overwork myself with six in a quarter. I think that should be capped at three or four. The overall workload involved with doing them and making sure the student is informed of the logical analysis and fashion that the project must go through. Time is a major factor, other factors may be IRB.
7. I do not have a target. I am willing to do my share at any time. If students approach me I am very likely to say yes. Time is a factor but I manage well right now.
8. Below four. Above four becomes a bottleneck if all are due at the same time. Time is the primary factor.
9. I set a number of about 4 team per year but I often exceed that, right now I am at 10. Time and workload are the constraints that affect my advising projects.
10. Not important for me. I don't have constraints for that. I advise everyone who asks me.

No.	Questions	Theme
13	What lessons have you learned as they pertain to your advisement strategies over time?	Process

1. Thesis should be student centered. Students get more out of it.
2. To be a hard nose. Draw a line and stick to it.

3. The students need to learn how to write. It is important to be able to communicate your thoughts on paper effectively. Be able to draw a thread through the different chapters of the project. The project should be an individual project and reduce the class workload for the students.
4. I have learned to rely on the student's judgment, and let the student drive the process. My expectations have evolved.
5. Learning the process at NPS, the environmental differences and where I can be best apply my knowledge.
6. I don't sweat a load over the quality of student work so much, it students project, it's going to get edited and I am a hands off advisor. I try to be a good reader and give good direction and try to understand that it's the student's project. I try to be hands off. The school does not have a guide on how to be a good advisor.
7. Most students don't understand how disciplined research needs to be done and must be educated on that process.
8. One size does not fit all, sometimes it requires more hands on or hands off depending on the student or team. Tailor approach must be fit all students.
9. The value of starting earlier. Understanding the process to get the student to graduate. I trust my intuition more learning from colleagues and the process.

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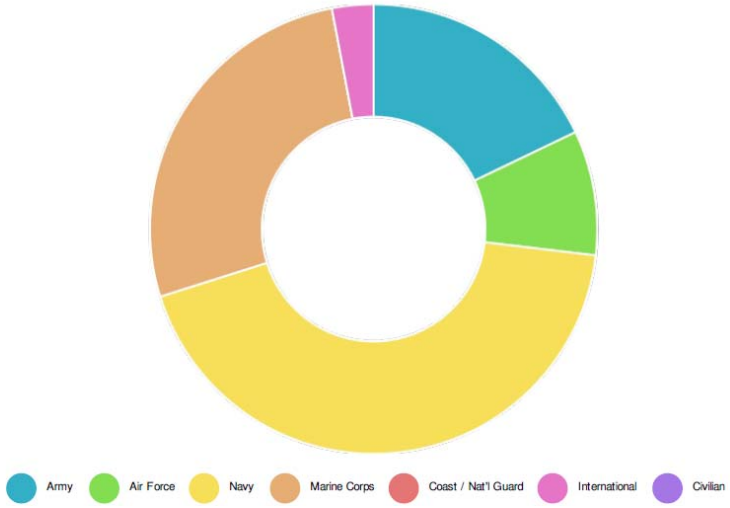
APPENDIX E. STUDENT SURVEY RESULTS

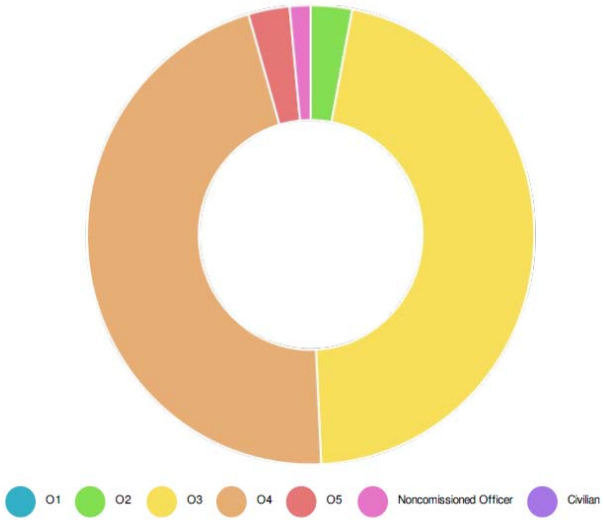
Please indicate your service.

	Army	Air Force	Navy	Marine Corps	Coast / Nat'l Guard	International	Civilian	Standard Deviation	Responses
All Data	12 (18%)	6 (9%)	**29 (43%)**	18 (27%)	0 (0%)	2 (3%)	0 (0%)	10.05	67



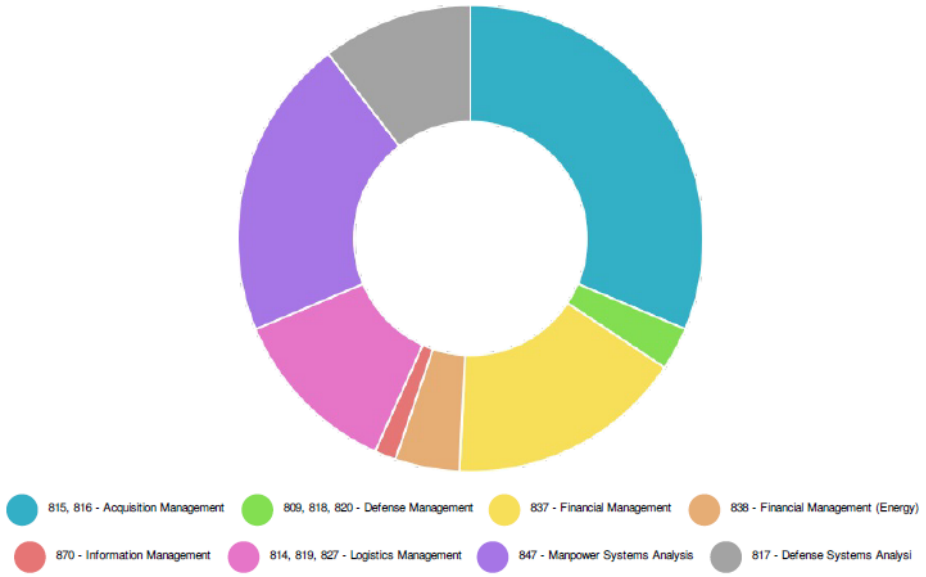
Please indicate your grade.

	O1	O2	O3	O4	O5	Noncomissioned Officer	Civilian	Standard Deviation	Responses
All Data	0 (0%)	2 (3%)	**31 (46%)**	31 (46%)	2 (3%)	1 (1%)	0 (0%)	13.57	67



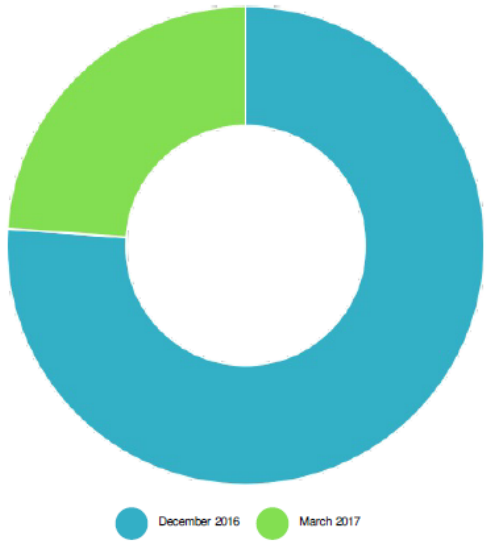
Please indicate your academic area.

	815, 816 - Acquisition Management	809, 818, 820 - Defense Management	837 - Financial Management	838 - Financial Management (Energy)	870 - Information Management	814, 819, 827 - Logistics Management	847 - Manpower Systems Analysis	817 - Defense Systems Analysi	Standard Deviation	Responses
All Data	21 (31%)	2 (3%)	11 (16%)	3 (4%)	1 (1%)	8 (12%)	14 (21%)	7 (10%)	6.36	67



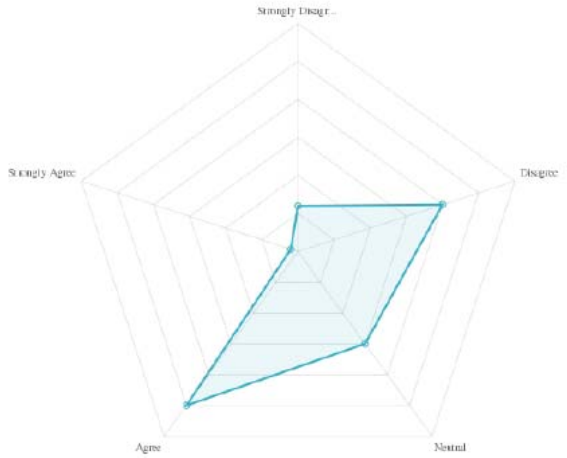
When are you projected to graduate?

	December 2016	March 2017	Standard Deviation	Responses
All Data	51 (76%)	16 (24%)	17.5	67



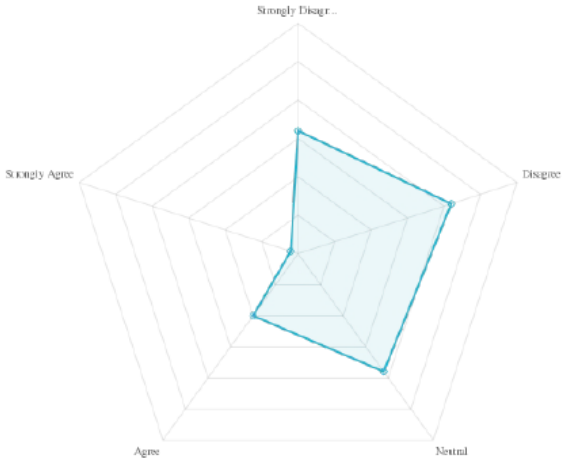
The GSBPP project/thesis is a valuable culminating exercise.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Standard Deviation	Responses	Weighted Average
Please select one:	6 (9%)	20 (30%)	15 (22%)	**25** **(37%)**	1 (1%)	8.82	67	2.93 / 5
								2.93 / 5



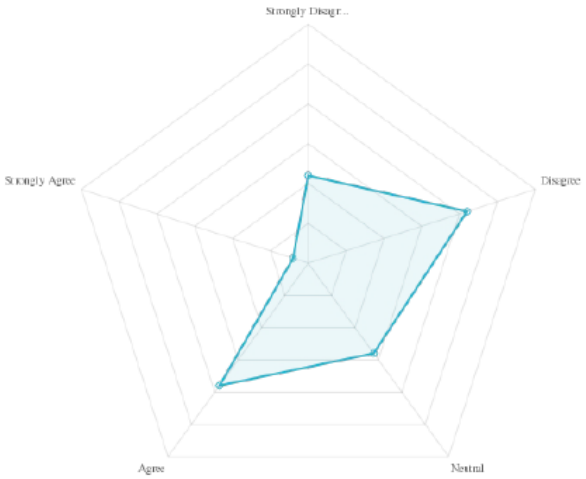
The GSBPP project/thesis accurately assesses my degree of mastery over graduate-level learning outcomes.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Standard Deviation	Responses	Weighted Average
Please select one:	16 (24%)	**21** **(31%)**	19 (28%)	10 (15%)	1 (1%)	7.23	67	2.39 / 5
								2.39 / 5



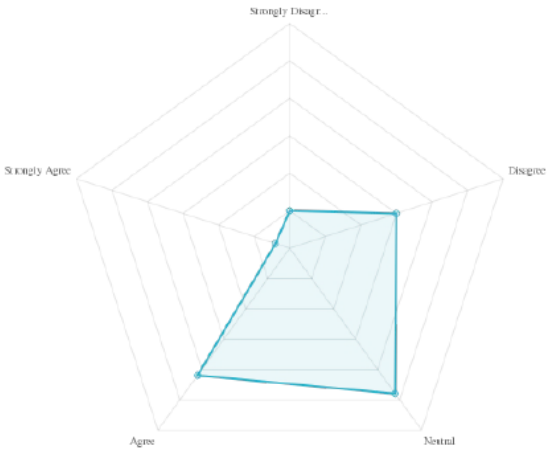
The personal/professional benefits that I derived from completing the GSBPP project/thesis are well worth the effort that I spent on completing it.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Standard Deviation	Responses	Weighted Average
Please select one:	11 (16%)	**21 (31%)**	14 (21%)	19 (28%)	2 (3%)	6.71	67	2.7 / 5
								2.7 / 5



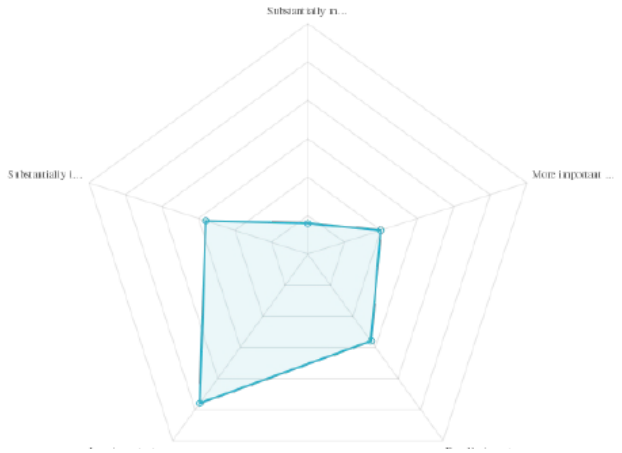
My GSBPP project/thesis will be valuable for others to reference in the future.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Standard Deviation	Responses	Weighted Average
Please select one:	5 (7%)	15 (22%)	**24 (36%)**	21 (31%)	2 (3%)	8.64	67	3 / 5
								3 / 5



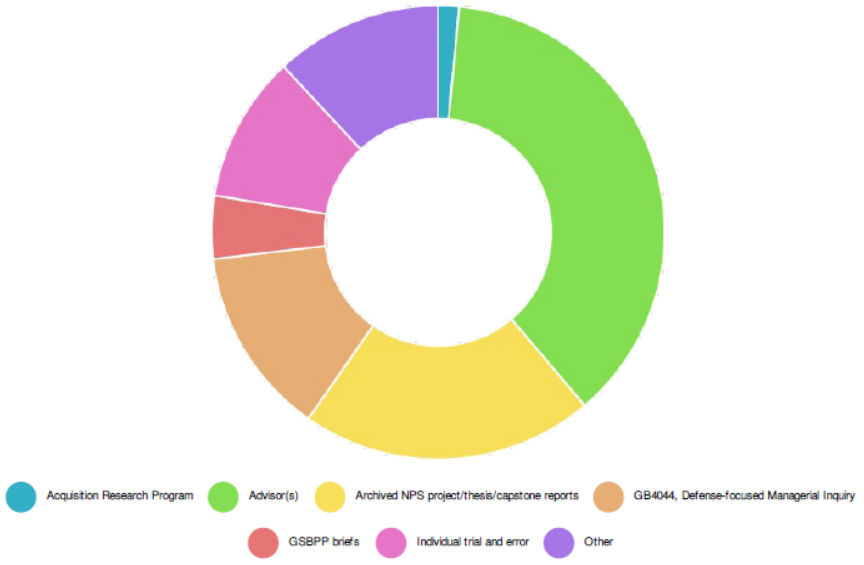
Without regard to NPS graduation requirements, the GSBPP project/thesis is _____ in comparison to my academic coursework.

	Substantially more important to me	More important to me	Equally important to me	Less important to me	Substantially less important to me	Standard Deviation	Responses	Weighted Average
Please select one:	4 (6%)	10 (15%)	14 (21%)	**24 (36%)**	14 (21%)	6.52	66	3.52 / 5
								3.52 / 5



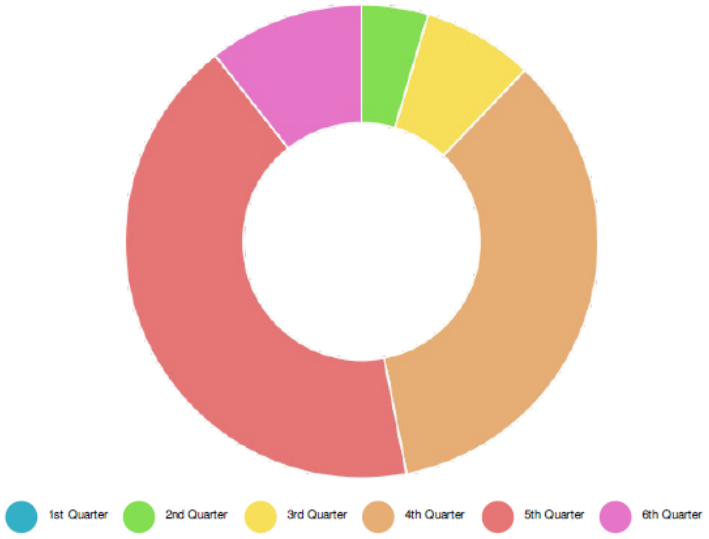
My primary source for gaining knowledge about the structure and content of my GSBPP project/thesis report:

	Acquisition Research Program	Advisor(s)	Archived NPS project/thesis/capstone reports	GB4044, Defense-focused Managerial Inquiry	GSBPP briefs	Individual trial and error	Other	Standard Deviation	Responses
All Data	1 (1%)	**25 (37%)**	14 (21%)	9 (13%)	3 (4%)	7 (10%)	8 (12%)	7.4	67



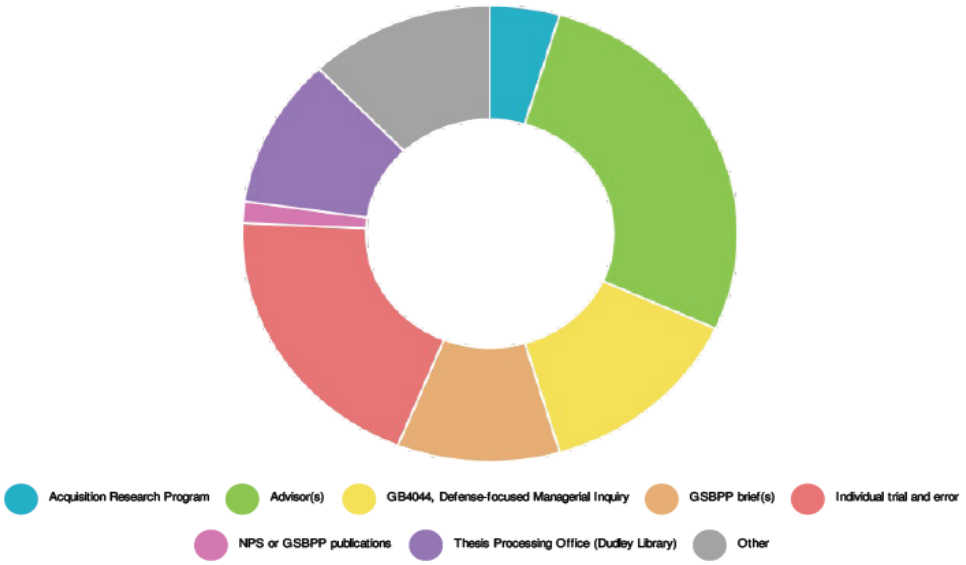
I gained a full and complete understanding of the structure and content of my GSBPP project/thesis during the:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	5th Quarter	6th Quarter	Standard Deviation	Responses
All Data	0 (0%)	3 (5%)	5 (8%)	23 (35%)	28 (42%)	7 (11%)	10.57	66



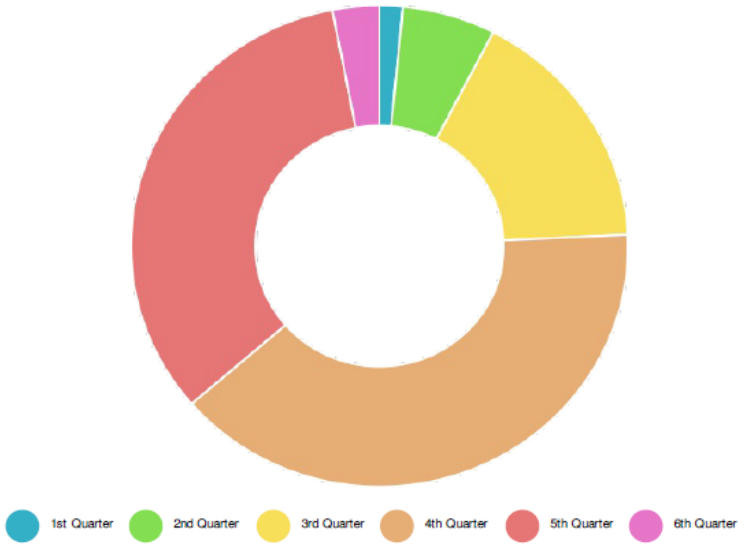
My primary source for gaining knowledge about the GSBPP project/thesis process was through:

	Acquisition Research Program	Advisor(s)	GB4044, Defense-focused Managerial Inquiry	GSBPP brief(s)	Individual trial and error	NPS or GSBPP publications	Thesis Processing Office (Dudley Library)	Other	Standard Deviation	Responses
All Data	3 (5%)	18 (27%)	9 (14%)	7 (11%)	13 (20%)	1 (2%)	7 (11%)	8 (12%)	5.02	66



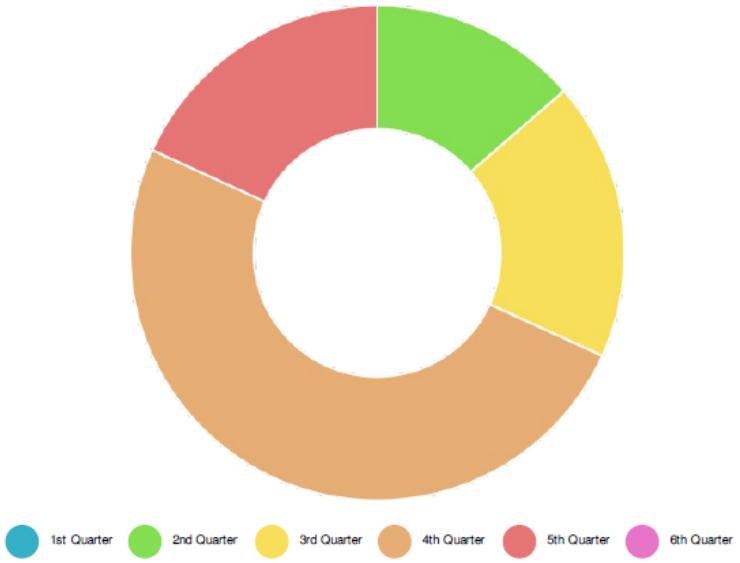
I gained sufficient knowledge, skills, and experiences to select a worthwhile research topic (and to begin earnest research on my topic) during the:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	5th Quarter	6th Quarter	Standard Deviation	Responses
All Data	1 (2%)	4 (6%)	11 (17%)	**26 (39%)**	22 (33%)	2 (3%)	9.8	66



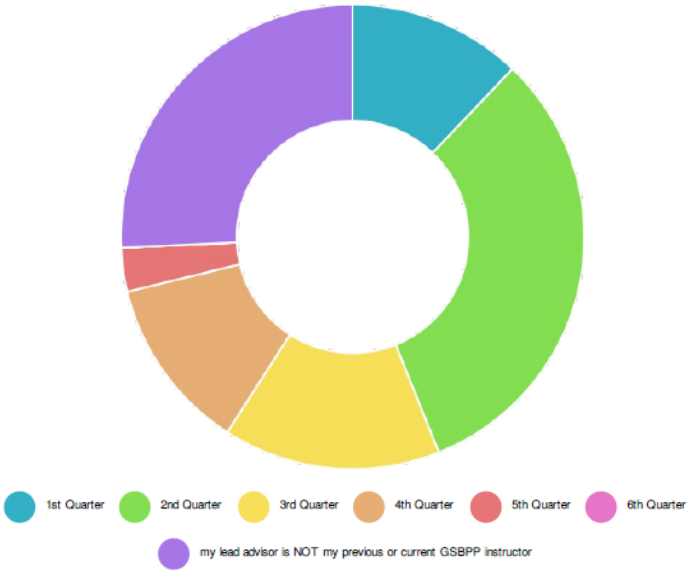
I selected my GSBPP project/thesis lead advisor during the:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	5th Quarter	6th Quarter	Standard Deviation	Responses
All Data	0 (0%)	9 (14%)	12 (18%)	**33 (50%)**	12 (18%)	0 (0%)	11.05	66



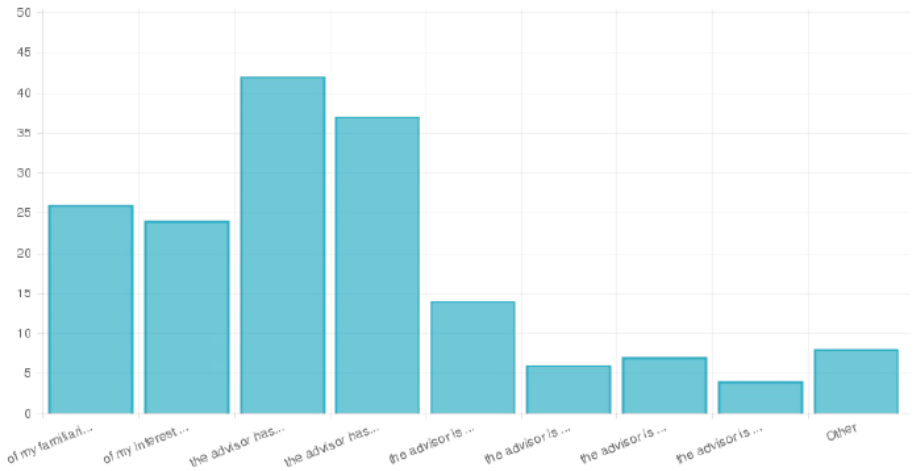
My GSBPP project/thesis lead advisor was my previous GSBPP instructor that I first had for course(s) offered during the:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	5th Quarter	6th Quarter	my lead advisor is NOT my previous or current GSBPP instructor	Standard Deviation	Responses
All Data	8 (12%)	**21 (32%)**	10 (15%)	8 (12%)	2 (3%)	0 (0%)	17 (26%)	6.97	66



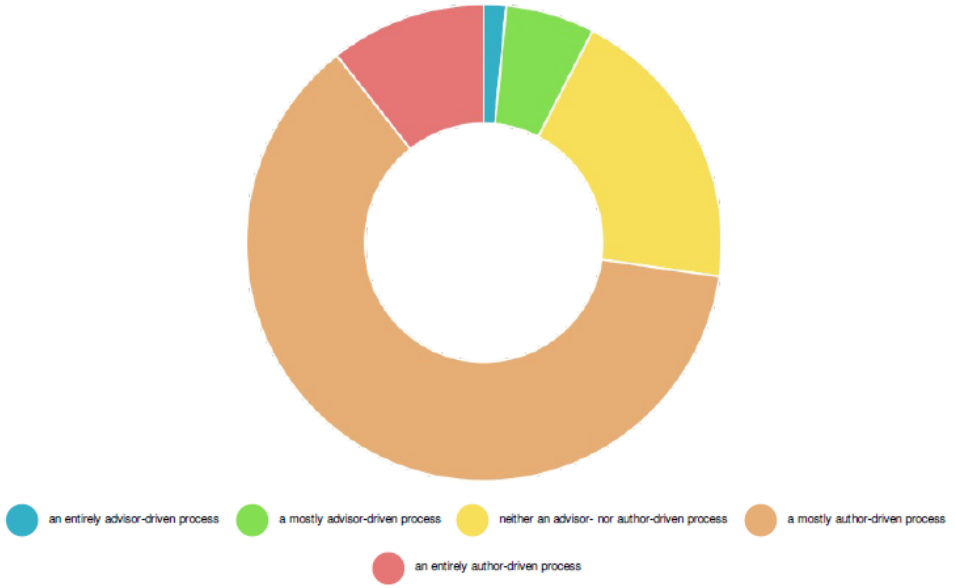
I chose my lead advisor because (MARK ALL THAT APPLY):

	of my familiarity gained through a prior instructor-student affiliation	of my interest in an advisor-proposed research topic	the advisor has the right credentials to guide my proposed research topic	the advisor has a well-suited personality	the advisor is hands-off	the advisor is hands-on	the advisor is guiding many other GSBPP projects	the advisor is guiding very few or no other GSBPP projects	Other	Responses
All Data	26 (39%)	24 (36%)	**42 (64%)**	37 (56%)	14 (21%)	6 (9%)	7 (11%)	4 (6%)	8 (12%)	66



From start to finish, producing the GSBPP project/thesis report was:

	an entirely advisor-driven process	a mostly advisor-driven process	neither an advisor- nor author-driven process	a mostly author-driven process	an entirely author-driven process	Standard Deviation	Responses
All Data	1 (2%)	4 (6%)	13 (20%)	**41 (62%)**	7 (11%)	14.46	66

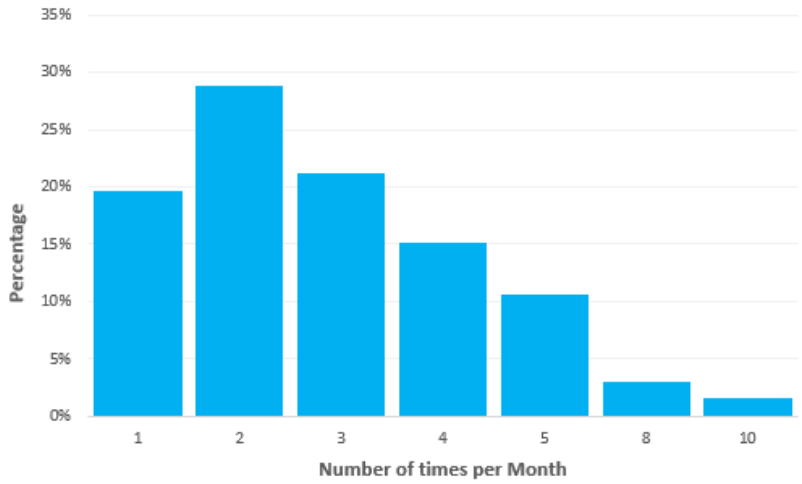


Typically, interactions (e.g., face-to-face meetings, email exchanges) between the project advisor(s) and author(s) were initiated by:

	the advisor(s)	the author(s)	Standard Deviation	Responses
All Data	4 (6%)	**60 (94%)**	28	64

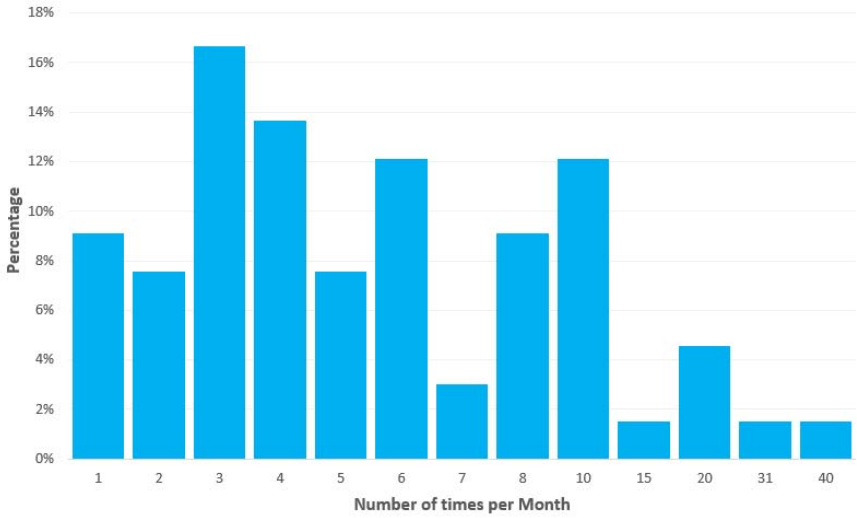
Since beginning work on your GSBPP project/thesis, how often have you met face-to-face with your advisor(s) on average?About ___ time(s) per month.**Please do not enter a range of values (single value only)

	1 time	2 times	3 times	4 times	5 times	8 times	10 times	Responses
All Data	13 (20%)	**19 (29%)**	14 (21%)	10 (15%)	7 (11%)	2 (3%)	1 (2%)	66



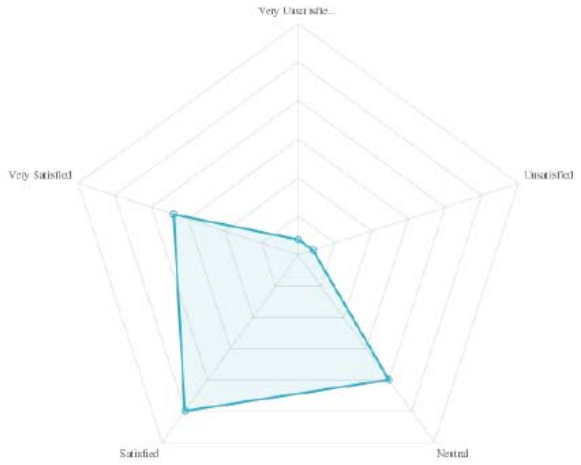
Since beginning work on your GSBPP project/thesis, how often have you exchanged emails with your advisor(s) on average?About ___ time(s) per month.**Please do not enter a range of values (single value only)

	1 time	2 times	3 times	4 times	5 times	6 times	7 times	8 times	10 times	15 times	20 times	31 times	40 times	Responses
All Data	6 (9%)	**5** (8%)	**11 (17%)**	9 (14%)	5 (8%)	8 (12%)	3 (3%)	6 (9%)	8 (12%)	1 (2%)	3 (5%)	1 (2%)	1 (2%)	66



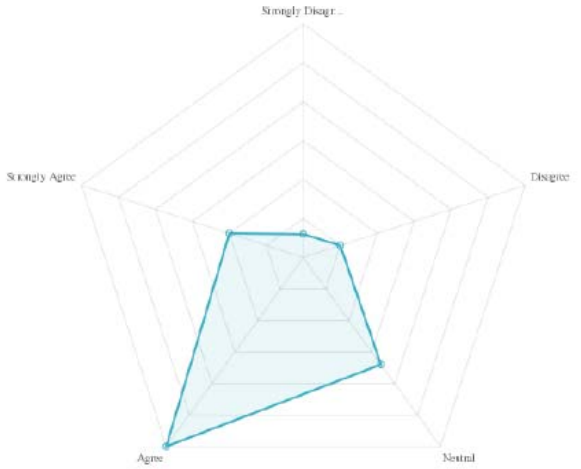
Overall, how satisfied are you with the extent of interactions (e.g., face-to-face meetings, email exchanges) between you and your advisor(s)?

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	Standard Deviation	Responses	Weighted Average
Please select one:	2 (3%)	2 (3%)	20 (30%)	**25 (38%)**	17 (26%)	9.5	66	3.8 / 5
								3.8 / 5



My advisor(s) had a clear, discernible, and structured approach to guiding my GSBPP project/thesis.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Standard Deviation	Responses	Weighted Average
Please select one:	3 (5%)	5 (8%)	17 (26%)	**30 (46%)**	10 (15%)	9.78	65	3.6 / 5
								3.6 / 5



Please describe the advising methods, techniques, or procedures employed by your advisor(s) that you found most effective. Be specific.

- Routine meetings once per week to check-in and monitor progress face-to-face conferences where ambiguities were discussed. Being very thorough in the process.

- Provides past publications he feels are a good example of what an MBA Professional Report should look like. Connections to outside resources.

- Helping me to realize the structure and information that should be included and researched Q&A

- Very helpful with initial phase of outlining and writing. Helped to organized thoughts and get started. Talking through the writing process and how to organize the paper was helpful. Meetings to discuss the outline of the project

- Our advisors have a number of contacts that they were able to leverage to help our team complete our research. Face to face worked best.

- Advisor sought me out because of my designator to expand work on a project they had already started in another community.
- My lead advisor assisted in framing my thesis outline. This tremendously helped me structure the context and content of my thesis outline, so that I wouldn't have to create additional work. Face to face guidance on where we should be focusing our efforts.

- That he was flexible on the research question due to changing availability of data sources Face to face meetings that provided clarity and amplification on the outline for the project. Provided outline and sample capstone projects to use as templates

- Stating very clear goals and using a very structured outline process were beneficial to me. I tend to procrastinate at times and the pushing was helpful. I also was able to do some pulling which let me feel like I had validity in the decisions and direction.

- We are a proactive group that actively seeks out our advisor. Interactions with our advisor are primarily driven by me and my partner. Our advisor has provided guidance when needed and is always available for us when we have questions. He is also very knowledgeable on the topic with years of experience. His advising methods are effective because he's knowledgeable and always available. However, he's generally provided little guidance on the MBA project/thesis process, and our peers have been the most valuable resource in completing our MBA project plan and the IRB process. The thesis processing office and briefs have also been informative and a valuable resource.

- The advisor has a strong background regarding the project topics and methodologies used to throughout the project.

- Face-to-face meetings.

- Face-to-Face critiques of the data and data analysis. He knew multiple methods of working through holes in the data. He was well versed in research methods and there was never a point where we didn't know how to get to the next step.

- Hands off approach with some clear guidelines to follow.

- Hands on advisors

- Clear schedule for deadlines

- Discussions about methodology and approach to thesis have shaped my thesis. Referring to previous work in face-to-face meetings.

- Face to face meetings and more hands-on teaching.

- Self-directed study. Forced us to read article and meet with advisor Face-to-face meetings to discuss my project.

- Active listening and then provided detailed guidance to keep my research on course.
  1. Professional guidance.
  2. Assisted with the IRB and ARP process.

- We selected our thesis instructor based on a past student's experience. He is knowledgeable in the subject and know who to research. We selected a topic he was interested in and recommended. He keeps a tracker of where we are in the process and updates it as needed. He has provided some updates to the structure of our outline but nothing yet on content. We are going through ARP and have structured our meetings with our thesis advisor to meet the ARP timeline.

- Provided examples of past research to gain an understanding of what was expected.

- Early on advisor was invaluable. Helped us focus our thoughts into the format, style and outline

- Discussion, mostly me asking questions or offering my ideas and getting feedback on how to better convey my message or by clarifying what they meant in their guidance.

Please describe the advising methods, techniques, or procedures employed by your advisor(s) that you found least effective. Be specific.

- Re-direction in the project goals. Setting and pushing feedback.
- Haven't got this far.
- very hands on when requested, but doesn't seem to have a clear vision of what to do
- Encouraged extensive background research when time was limited. Needed to focus on the research questions more specifically a little earlier in the process.
- Having a advisor who commutes has proved to be a challenge. Also the authors have already gotten to stopping point and is waiting on the advisor for additional information to put into the thesis I.E. that actual stats from the survey.
- At least one of our advisors has to be constantly reminded where we are at in the MBA Project process. It seems like we are just another check in the box. Email/phone calls
- I like deadlines -- the project has very fluid deadlines, particularly regarding IRB. It would help me if there was a lot more structure or if we had been told timeliness expectations early on (speed of approval, etc.).
- Not sticking to agreed upon timelines for feedback.
- Minimal emails were not as beneficial between testing times. Responses to emails were also not as optimal. N/A
- That he was not fully vested in the outcome.
- Because we are proactive, our relationship with our primary advisor has worked well. Otherwise, he is relatively removed unless we request or require his assistance. Our secondary advisor is not involved in our project in any capacity, and we've had little interaction with him other than to sign our project plan.
- It feels as if sometimes we go in a circle regarding the outline and chapters. Not very schedule driven.
- hands off advisor
- Navigating and attempting to apply costing methods learned to Navy commands has not been as fruitful as I initially thought it would be. Communicating via email.

- Email

- All data collection is done by advisor (working on one of his projects) leaving us very little control over the project. Difficult to keep timelines. The "do whatever ARP wants" answer

- I cannot think of any ineffective methods, techniques, or procedures at this time. Honestly, I cannot be more satisfied with my advisor.

- On a side note; question 18 was intentionally left blank because I believe we both equally initiate emails.

- None. Advisers were wonderful. However, the process of finding a suitable topic and a sponsor that is willing to provide meaningful data is a waste of man-hours. Program sponsors should provide topics and assign personnel to support, or eliminate the requirement.

- The advising methods is during sit down conversations and emails, mostly face to face. He is always available for questions. Providing current up to date research

- They told us that if there was anything grammatical (aka "stupid mistakes") they would stop reviewing it and penalize us a week before we could resubmit. This compounded with the library being backed up for reviewers due to SEPT graduates and ARP not having a reviewer under contract makes our end corrections MUCH slower than the beginning corrections.
- Sometimes not very much guidance is given, which leaves me with not really have a solid direction to go in.

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