2024-12

ANCHORING TO QUALITY STANDARDS: ACHIEVING ISO 9001 CERTIFICATION AT THE NAVAL POSTGRADUATE SCHOOL'S DEPARTMENT OF DEFENSE MANAGEMENT

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https://hdl.handle.net/10945/73546

NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

SUPPLEMENTAL TO SYSTEMS ENGINEERING CAPSTONE REPORT

(4 of 9: Department of Defense Management Program Assessment Policy (Draft)

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by

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December 2024

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REPORT DOCUMENTATION PAGE	*Form Approved OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC 20503.

1. AGENCY USE ONLY ***(Leave blank)***	**2. REPORT DATE** December 2024	**3. REPORT TYPE AND DATES COVERED** Systems Engineering Capstone Report

4. TITLE AND SUBTITLE ANCHORING TO QUALITY STANDARDS: ACHIEVING ISO 9001 CERTIFICATION AT THE NAVAL POSTGRADUATE SCHOOL'S DEPARTMENT OF DEFENSE MANAGEMENT.	**5. FUNDING NUMBERS**
6. AUTHOR(S) Siddiq A. Hasan, Derez A. Jones, and Stephen J. Loman	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000	**8. PERFORMING ORGANIZATION REPORT NUMBER**
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A	**10. SPONSORING / MONITORING AGENCY REPORT NUMBER**

11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. This item is a supplemental.

12a. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A. Approved for public release: Distribution is unlimited.	**12b. DISTRIBUTION CODE** A

13. ABSTRACT (maximum 200 words)

This capstone project investigates the pathway to achieving ISO 9001:2015 certification for the Department of Defense Management (DDM) at the Naval Postgraduate School (NPS). Although DDM upholds high academic standards and existing accreditations, the lack of ISO 9001:2015 certification reflects gaps in the current Quality Management System (QMS) in areas such as process documentation, risk management, and operational consistency. Using a systems engineering (SE) approach, the project systematically decomposes ISO requirements, conducts a gap analysis, and identifies specific areas of non-compliance. Findings reveal that while the DDM meets several key requirements, targeted improvements are needed to align fully with ISO standards. Recommendations include the creation of a comprehensive QMS roadmap that provides step-by-step guidance, resource allocation, and a timeline for certification. The proposed framework not only supports the goal of ISO certification but also strengthens operational efficiency, stakeholder confidence, and quality assurance within the DDM.

14. SUBJECT TERMS ISO 9001:2015, Quality Management System	**15. NUMBER OF PAGES**
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT Unclassified	**18. SECURITY CLASSIFICATION OF THIS PAGE** Unclassified	**19. SECURITY CLASSIFICATION OF ABSTRACT** Unclassified	**20. LIMITATION OF ABSTRACT** UU

DDM Policy Statement
2024-002
Assurance of Learning
Replaces: January 2020
Effective: ---- -------2024

PROGRAM ASSESSMENT

Program assessment efforts in DDM intend to: (1) assess program competencies and objectives for continuous program improvement; (2) drive improvements in student learning; and (3) ensure proper measurement of competencies and objectives for accreditation purposes.

1) Scope:

a) This document establishes policy, process, and procedures for conducting assessments of Program Competencies and Program Objectives. This document is intended to be consistent with the Western Association of Schools and Colleges (WASC), and the Association to Advance Collegiate Schools of Business (AACSB), accreditation standards on student learning. It formalizes procedures implemented by DDM to meet Assurance of Learning (AoL) standards for accreditation.

b) This document does not describe specific assessment tools and techniques (e.g., development of rubrics and benchmarks).

c) Outlined in this document are the key roles and responsibilities for those involved in the assessment framework (Figure 1); programs covered; a description of programs' competencies and objectives, course's mandatory objectives, and course's outcome; and assessment process.

2) Key Roles and Responsibilities:

a) **Faculty Associate(s) for Assessment and Accreditation (FA—AA):** (1) manages accreditation activities, including assessment activities; and (2) maintains master files of assessment-related documentation (i.e., direct assessment schedule, syllabi; assessed student products, and rubrics; indirect assessments such as surveys; documentation of action plans on program improvements). Twice a year, the FA—AA provides DDM Chairs with aggregated results of direct and indirect assessments, closing the loop reports, a schedule of upcoming direct assessments, and any available information from recent assessments.

b) **Area Chairs (ACs):** The ACs review aggregated assessment results to identify and recommend potential areas for program and department improvement. To form appropriate recommendations the Chairs will also consult with relevant subject matter experts as needed (e.g. Graduate Writing Center, Teaching and Learning Commons, etc.). The ACs task the AAs with implementation of recommendations.

c) **<u>Assessment of Learning (AoL) Board</u>**

The AoL consist of the Assistance Chair of Instruction (Chair), and the Academic Associates (AAs) of the following DDM's programs:

- MS in Program Management.
- MS in Contract Management.
- MS in Financial Management.
- MS in Logistics Management.
- MS in Manpower Analysis Management; and
- LEAD program.

Responsibilities:

1. Ensures a proper alignment of course objectives with the DDM's program competencies and program objectives.
2. Responsible for implementing and monitoring actions recommended by the Area Chairs after review and analysis of the direct and indirect assessment results.
3. Identify strengths, weaknesses, and gaps of curricula and modify them accordingly to enhance students' learning experience.
4. Provide "Closing the Loop" (CtL) statements and/or reports to the FA—AA to record program and curriculum improvements.

d) **<u>Course Coordinators (CCs):</u>** The CCs support Academic Associates in all assessment activities. They also work with the FA—AA to map courses to Program Competencies. In consultation with area faculty the CCs ensure that a course's objectives reflect *at least one* Program competencies and objectives. The CCs are responsible for the review and update of the mandatory course objectives and for ensuring that any other instructor who teaches the course integrates these objectives into the course.

e) **<u>Instructors:</u>** Faculty members who teach courses in the listed resident and DL programs below (see 4) are contacted regularly for assessment.

(f) **<u>Board of Advisors (BoA):</u>** will offer strategic guidance, expertise, and support to help DDM succeed and achieve its goals. The BoA consist of eight members:

- Chair: A senior faculty member with extensive experience in defense management education.
- An external advisor from academia: An expert in management education or a related academic field, to offer an external perspective on trends, challenges, and opportunities in management education.
- An external advisor from DoD: A senior civilian or military officer, to offer an external perspective on the trends, challenges, and opportunities in defense management.
- An external advisor from industry: An expert in defense industry, to offer an external perspective on trends, challenges, and opportunities in defense industrial base.
- Two DDM's faculty representatives: Additional faculty members representing a diversity of our faculty seniority and expertise.

- Two student representatives: Current students to provide insights from the learner's perspective.

Responsibilities:

1. Strategic guidance to DDM's leadership
2. Specialize knowledge and expertise in relevant industries and sectors.
3. Providing mentorship, coaching and feedback to overcome possible challenges.
4. Assist with problem solving and decision making on specific issues related to DDM's continuous improvement program.
5. Periodically evaluate DDM's and its leadership team performance providing input on strengths and areas of improvement.

3) <u>Programs Covered.</u>

a) Resident Programs:

- MS in Manpower Analysis Management. (817-847)
- MS in Defense Program Management. (816/870)
- MS in Defense Contract Management. (815)
- MS in Defense Financial Management. (837)
- MS in Defense Logistics Management. (819/827)

DDM Program competencies and objectives are developed at the program level. There will be no more than eight stated program competencies and objectives, which are intended to cut across the new MS core and curriculum specific programs. Faculty develop rubrics for each of the program competencies and program objectives.

b) Distance Learning Programs:

- Master of Science in Defense Contract Management (835)
- Master of Science in Defense Program Management (836)
- Master of Science in Defense Financial Management (857)

Program competencies and objectives for the MSDCM, MSDPM, and the MSDFM are developed at the program level. Faculty members and instructional administrators for the programs develop rubrics for the program competency and objective.

4) <u>Program Competencies[1], Program Objectives, Course mandatory Objectives, Course</u>

[1] Competencies are defined here as statements of desired student learning outcomes at the degree or curriculum level (e.g., "Our graduates will be critical thinkers"; "Our graduates will be effective communicators", and so forth).

<u>outcomes, and Measurement:</u>

(a) **Degree and graduate program competencies** are developed at the program level. They are general statements of what is going to be learned and describe what students will be by the end of the program (e.g., *Our graduates will be critical thinkers*). The faculty has approval authority for program competencies and program objectives.

(b) **Program objectives** are developed at the program level. They are defined as desired learning outcomes which are measurable in terms of observable behaviors, traits, or attributes and observable behavior (*e.g., Our graduates will accurately assess arguments from multiple viewpoints*). There will be one program objective corresponding with each program competency.

(c) **Course objectives** describe what a faculty member will cover in a course and what he/she intends the students to learn by the end of the course. The course objectives should be student-centered; should break down the task, use action verbs, and be measurable (Ambrose et al., 2010, p. 244). Each course shall have a set of ***mandatory objectives*** listed in the syllabus. Mandatory objectives must be taught by any instructor who delivers the course to ensure that it fulfills its role in the program. The CC ensures that any other instructor who teaches the course is aware of the mandatory objectives and that each course has at least one mandatory objective that supports at least one program competency. Courses may also have one or more *discretionary* course objectives.

(d) **Course outcomes** are detailed descriptions of what a <u>student must be able to do</u> at the conclusion of a course (e.g., W*hen given x, students will be able to*…)

(e) **Rubrics** are established for both the DDM Resident (MSM and new MS degrees) and DL programs (MSCM, MSPM, and MSDFM). Each program competency and program objective will have a rubric (in some cases two) to assess the associated competency and objective. The rubrics reflect specific items upon which the student course work is assessed, to include both direct and indirect measures. Rubrics are applied to artifacts produced by individual students, such as writing assignments, exams or quizzes, problems, case studies, exercises within a course, and so forth. Official rubrics are archived on the ASL Sakai Site. [2]

5) <u>Assessment Process</u>

DDM will develop and execute a sampling plan to gather assessment of student learning from the following data:

a) Indirect assessment data are collected from surveys (e.g., capstone, entrance, exit, etc.) and feedback from stakeholders and other observers (e.g., Sponsor curricular review reports).

b) Direct assessment data are collected from individual student's demonstration of learning through project, paper, presentation, or exam. No team assignments such as group papers, group reports, group presentation, and so forth will be assessed unless each student can be assessed singularly within the group assignment (i.e., all the team members give a presentation; all the team members write a part of the paper, which can be individually assessed).

[2] https://cle.nps.edu/portal. Navigate to Assurance of Learning Efforts in GSDM; Resources; Rubrics (Official)

Data Collection: The FA-AA identifies courses and the instructor's student products on which to perform the assessment. Assessments of individual learning products within a course should align with program competency and program objectives. A month prior to the start of a course offering in which a direct assessment is to occur, the FA—AA requests and obtain commitments from instructors to conduct the direct assessment, and provide guidance, as necessary, to ensure that the assessment is conducted properly.

Efforts will be made by faculty to assess all students enrolled in one section of a course. A randomly drawn sample of at least 50% of the students enrolled in a section can be used for AoL assessment purposes. For example, if in a course 60 students are split evenly in 2 sections the instructor can randomly pick the section where at least 15 students shall be directly assessed on that objective.[3]

To minimize reliance on assessments of non-participating faculty members, courses taught by contractors, intermittent faculty, and visiting faculty are excluded from the assessment process. Only DDM participating faculty members will perform assessments of student learning. If only non-participating faculty members are teaching a course, the course coordinator for that course will conduct the assessment with the help of the instructor and the area chair.

Compile Data: At the end of a quarter, the FA—AA collects the assessment documents from instructors performing the assessments; aggregates data from multiple assessment products for the same program competency and program objective, tabulate the results and distribute to the area chairs.

Analyze and Evaluate. The area chairs will analyze and evaluate the results as described in section 2b.

Implement Improvements and CtL: The AoL Board will implement improvements as necessary and as directed by the ACs as described in section 2c.

Questions or concerns may be addressed to the approval of rdjone1@nps.edu.

Raymond Jones

Digitally signed by Raymond Jones
Date: 2024.04.05 15:33:54 -07'00'

Raymond D. Jones Col. (ret.),
U.S. Army DDM, Chair

[3] In this example, all 15 assessed students may be from the same section; sampling from both sections is not required.

Figure 1. Assessment Framework and Process

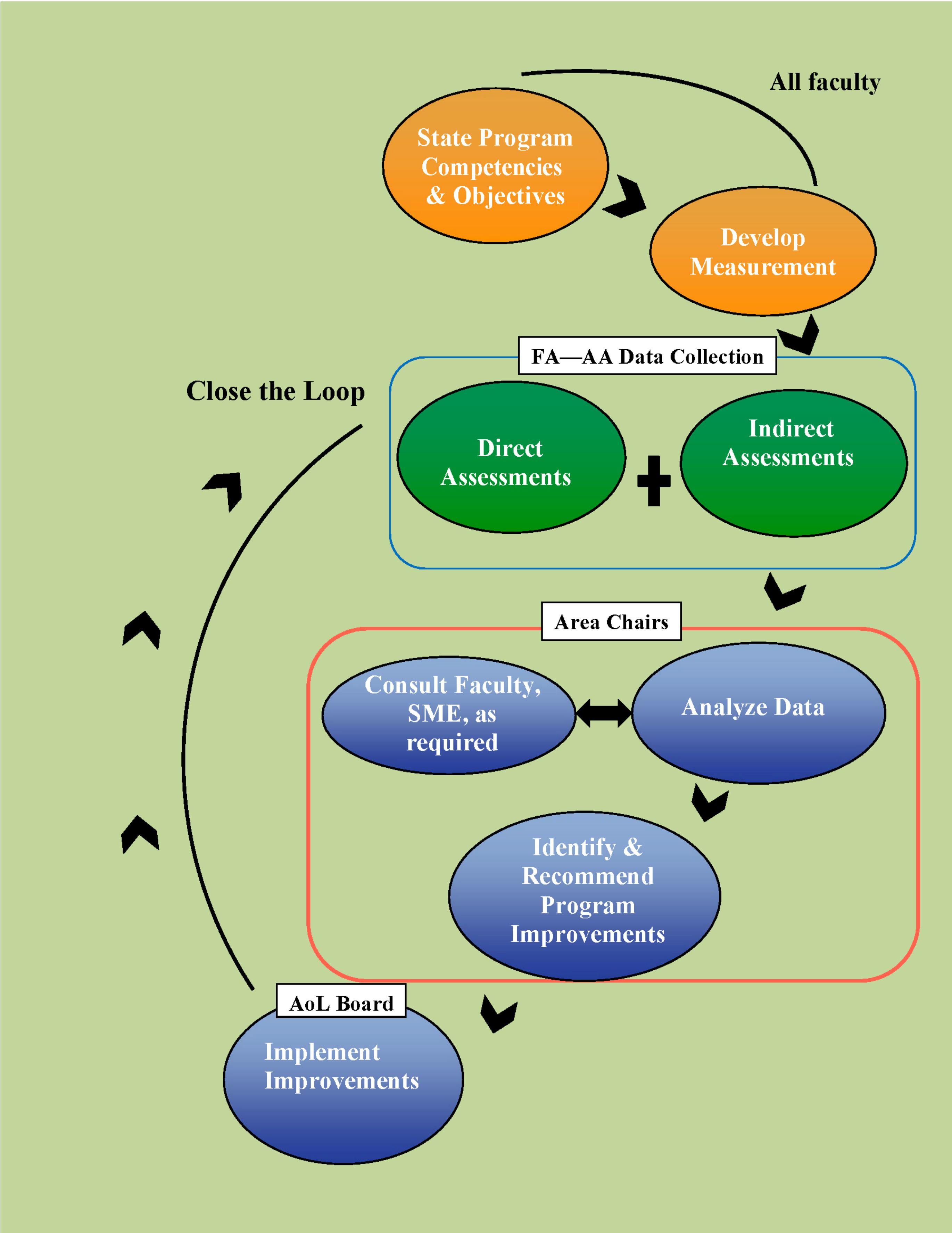

Figure 2. Sample Curricula Mapping

Note: The complete map can be accessed on the ASL Sakai site. Navigate to Assurance of Learning Efforts in DDM—Resources—Curricula Mapping. Updated maps will be posted on this site in future iterations.

Key Definitions									
I=Introduced: Course focuses on basic knowledge, skills, and entry/level complexity of the outcome.									
R=Reinforced: Course reinforces knowledge and skills of a subject matter, providing opportunities for students to practice.									
E=Emphasized: Course integrates and applies concepts, skills, and knowledge to demonstrate proficiency in the outcome.									
MS Degree Residents: Programs' Competencies & Objectives.									
Courses	**C.C.**	**Qtr. Res**	**Qtr. DL**	**Critical Thinking** Students will accurately assess arguments from multiple viewpoints.	**Ethics** Students make ethical decisions.	**Problem Solving** Students will develop and evaluate solutions and select the best course of action in an unfamiliar defense-relevant scenario.	**Managing Resources** Students will determine best use of scarce resources.	**Communications-Writing** Students will write effective documents for diverse audiences.	**Communications-Speaking** Students will deliver effective oral briefings for diverse audiences.
MN2039	Bacolod	2				I	I		
MN3010	Helzer	1		E	I	E	R	R	R
MN3041	Regnier	2		I	I	I			
MN3040	Massenkoff	2		R	I	I		I	
MN3042	Apte U.	3		E		E	E	R	
MN3056	Rendon J.	1		R	I	E		E	