

Chapter 1

INTRODUCTION TO RESIDENT INSTRUCTION

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Introduction

Overview

Volume Five of the Standard Operating Procedures (SOP) for Coast Guard Training Systems covers the systematic design of instructional materials for resident instruction.

The Coast Guard uses a five-phase Instructional Systems Design (ISD) model to create desired training results. The mnemonic ADDIE is used for remembering the phases: **a**nalysis, **d**esign, **d**evelopment, **i**mplementation, and **e**valuation. This SOP expands on that concept adding guidance for project management of instructional design projects (Chapter 2); assistance on how to manage changes to courses (Chapter 8); and guidance on how components of the training system fit together (Chapter 9).

The material in this SOP expands on the information that graduates of the Coast Guard's Course Developer Course (CDC) are taught. Many of the performance skills and knowledge components are the same; however, more specific details incorporating the ISD ADDIE methodology have been included. In addition to the job aids, worksheets, and templates introduced in CDC, the SOP includes completed examples and tip sheets covering ISD topics in more detail. You can use these additional resources to continue building your ISD skills and competencies.

Introduction, Continued

Purpose

The purpose of this SOP is to provide a standard methodology for those responsible for producing training-related materials for the Coast Guard. The intention of this SOP is to help you determine the additional information necessary for designing and developing a valid and reliable instructional training program with the highest fidelity possible. Valid and reliable training is the training system's goal to prepare the workforce for Coast Guard operations.

Valid materials are defined as activities that are high level simulations of actual tasks they perform on the job.

Reliable training is defined as training materials that are so descript, that student and instructor alike are capable of determining whether student performances match actual Coast Guard standards for performance on the job.

This SOP is a tool to assist in the development of consistent Coast Guard training materials. The Coast Guard ISD model, as presented here, is based on theory, research, and a considerable amount of practical experience. It presents the breakdown of instructional design tasks much in the same way a cookbook breaks down recipes – you do *this*, then you do *that*.

Target Audience

The ISD process outlined in this SOP is prescriptive enough to enable the junior active duty course developer to complete a project with the oversight of their active duty supervisor and/or a civilian Instructional Systems Designer. Additionally, the SOP includes guidance for the supervisor and designated project manager on how to plan and track the project toward successful completion. Each phase will explain in more detail the appropriate target audience for that particular phase.

Active duty course developers must be graduates of the Coast Guard's Course Developer Course (CDC) and have or be pursuing the Coast Guard "PERJI" Competency Code. (See *SOP, Vol. 13* for additional guidance on active duty course developer professional development.)

Introduction, Continued

CG ADDIE Model

The ADDIE approach to creating training materials has been applied and used by both military and private sector for many years. One of the limitations in how the model is applied is that ADDIE often has a waterfall effect, meaning that the output of each phase leads into the next phase as an input. Although the layout of the chapters of this SOP follow the ADDIE mnemonic; they are broken up by chapters throughout this SOP, each phase of the ADDIE process is explained, key outputs identified, and the processes to achieve those outputs are outlined. This SOP recognizes that ISD teams that work analysis, design, and development issues simultaneously, with the gathering and disseminating of information to each phase throughout, produce the most effective and efficient training. Additionally, just as evaluation is iterative and throughout each phase, we've introduced the SOP with Project Management which embodies the Coast Guard ADDIE model and helps ensure timely and successful management of your project from start to finish. The Coast Guard ADDIE model, shown below, illustrates the process as a whole as will be presented throughout this SOP.



Introduction, Continued

ADDIE Process

Analysis — This phase involves identifying the end goal of training—the performance we’re trying to affect. We use analysis tools to break jobs down into the tasks and task steps that make up Coast Guard performance. Who performs? Under what conditions are the tasks performed and to what tolerances? Which tasks should we train, and which tasks do our students already know how to do?

Design — This phase involves creating a blueprint for instruction. We ask questions such as: What kind of learners will use this training program, and how should we design instruction so it is best tailored to meet their needs? What do we need to know about the tasks to design effective instruction? Which instructional methods (role play, simulation, case study, etc.) will work best for this set of learners and for this kind of material? What strategies can we employ to help learning occur and to ensure students transfer what they learn to on-the-job performance? What kinds of learning assessments or tests should we create to ensure learning took place?

Development — This phase entails building all aspects of instruction necessary to execute the learning strategy and any supporting documentation. Development includes instructor activity guides and materials appropriate for the mode of delivery. In every instance, materials are tested and evaluated to validate that the activities and materials are ready to use by the learner.

Implementation — This phase refers to the actual delivery of instruction in a way that ensures student mastery of the learning objectives and transfer of necessary skills to the job setting. This starts with the pilot of the very first course and continues until the course is discontinued.

Evaluation — This phase measures the effectiveness and efficiency of the instruction. Evaluation asks questions such as: Did the training do what it was intended to do? Are instructors delivering the training as designed? Does the instructional strategy work for the instructors as well as the learners?

Introduction, Continued

Audit Trail

The value of a workflow model, like ADDIE, is that it provides a systematic means of determining the correct level of performance support and a formal process for documenting the decision along the way. The job aids and worksheets in this SOP act as documentation of work done, and decisions made to form an ISD audit trail. Likewise, the project management framework is provided for coordinating a team's activities and the contributions of each team member. The reason for creating an audit trail is so in the future, course developers can go back, review, and evaluate decisions that were made, and if necessary make informed corrections.

Audit trails are also useful in evaluating how the ISD process worked for given projects and what key learning points can be extracted. They can also be useful in addressing how ISD projects can be managed in the future to enable greater success, as well as what actionable items still exist for a course.

How Does the Resident Instruction SOP Relate to the Other SOPs?

The Coast Guard Training System's SOPs define terminology; provide procedural guidance for internal, inter-service, and contractor support. The purpose of each of the SOPs is to provide default methodologies for much of the work within the Training System. The Resident Instruction SOP containing the "how to's" that any course developer shall follow to ensure all Coast Guard members are using the same proven processes to obtain consistent and quality outputs.

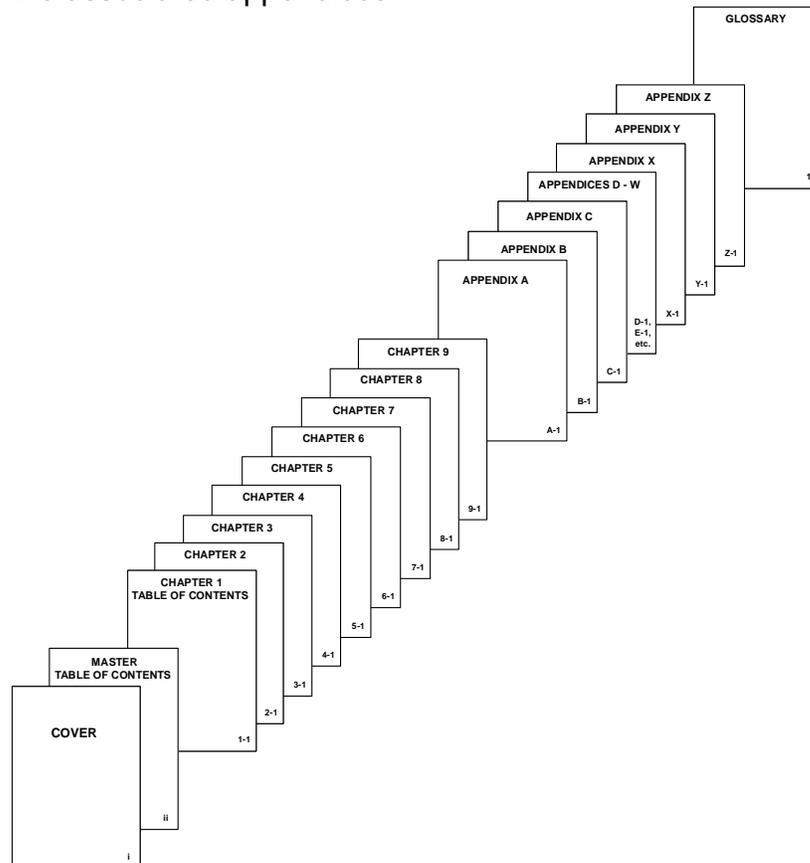
The Resident Instruction SOP has a critical relationship to the other Coast Guard Training System SOPs because it defines the bulk of the process from which our Coast Guard training programs are built. When an analysis (*SOP, Volume 2*) has determined that training is the appropriate or recommended solution, the Resident Instruction SOP takes over and designs the framework of the course on which the curriculum outline (*SOP, Volume 6*) addresses for resourcing and instructor staffing. The secondary benefit of having a specific Coast Guard ISD process, is that becomes the default methodology to hired contractors responsible for producing training materials and programs for the Coast Guard, so no matter who develops a Coast Guard training program it will look and feel the same.

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Understanding This SOP

Document Structure

This SOP contains nine chapters which provide guidance on all aspects of resident course development for the USCG. Each chapter contains a Table of Contents on the first page, which includes all the contents within that chapter with the exception of the associated appendices.



- Chapter 1:** Introduction
- Chapter 2:** Project Management
- Chapter 3:** Analysis (Task Analysis)
- Chapter 4:** Design Phase
- Chapter 5:** Development Phase
- Chapter 6:** Implementation Phase (Pilot)
- Chapter 7:** Evaluation
- Chapter 8:** Course Maintenance
- Chapter 9:** Training Management

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Understanding This SOP, Continued

Document Structure, Continued

Chapters 3 through 7 are aimed at course developers and instructional designers and specify required inputs and outputs for each phase of the ADDIE model. Generally speaking, the structure (which appear as block headers on the page) within each of these chapters is as follows:

- Overview
- Audience
- Purpose
- Inputs
- Outputs
- Process Overview
- Steps
- Additional Resources

Chapters 2, 7, 8, and 9 are aimed at individuals who are managing the ADDIE process. Thus, these chapters have a slightly different presentation.

Appendix Structure

Chapters 2 through 7 contain appendices that include –in this specific order– job aids, templates (or worksheets), worked examples, and tip sheets. Chapters 8 and 9 each only have one appendix that provide worksheet and job aid/checklist to support chapter specific processes. While most templates and worksheets have corresponding job aids, there are some that do not since the template or worksheet itself serves as a job aid.

Worksheets and templates in Word have been provided for download on the SOP webpage at:

http://cgweb.tcpet.uscq.mil/T_Div/CDT/default.asp

Understanding This SOP, Continued

Navigating the SOP

Due to the volume of this SOP, the chapters and appendices have been created as separate files. The first page of each chapter contains a separate Table of Contents for that chapter. Appendices contain a table on the first page listing the number and title of the contents.

Additionally, you can use the following options to navigate to other areas within the SOP:

- Scroll through the page thumbnails of the document using the scroll bar on the left panel in Adobe Acrobat.
 - Use the Master Table of Contents at the front of the SOP
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