**Defense Acquisition University**

**FPD 200 Participant Guide**

**Module 2, Case Study 2 (Learning Objectives)**

***February 3, 2012***

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What We Learned in the Previous Case Study

In the previous case study, we saw an example of how the analysis phase of the ADDIE model lays the foundation for the design phase for a learning asset that provides foundational knowledge about the Federal Acquisition Regulation (Parts 1-53) and the Defense Federal Acquisition Regulation Supplement (DFARS). Specifically, we focused on the area of contracts in this subject, where the needs analysis identified four key topics:

* + Contract overview
  + Contract planning
  + Contract formation
  + Contract management

In particular, we looked at how Candace worked with Victor and members of the FIPT to conduct a job task analysis in the area of contract planning. After researching all areas of contract planning, Victor was able to complete the job task analysis.

From this analysis, Victor identified five desired performance competencies:

* **Understand the policies pertaining to types of contracts that may be used in acquisition.**
* **Understand the policies pertaining to selecting contract types.**
* **Understand the policies pertaining to fixed-price contracts.**
* **Understand the policies pertaining to cost reimbursement contracts.**
* **Understand the procedures for selecting contract types.**

Victor also completed the learner analysis and determined that the target audience for the learning asset was educationally and experientially diverse and did not have common prerequisite coursework or prior work experience. Thus, Candace and the curriculum design team determined that they need to design the learning asset in a manner that accommodates all new hires, assuming that the learners have no foundational knowledge or skill sets in the area of contract planning.

Informed by the outcomes of the job task analysis, the needs analysis, and the audience analysis, Candace and the other members of the curriculum development team are ready to move into the Design phase of the ADDIE model.

The Design phase of the ADDIE model includes the following steps:

* Creating measurable objectives that will delineate what the learner will know or be able to do at the end of instruction
* Determining and developing appropriate means of assessing the learner to validate that the learner has achieved the learning objectives
* Developing an instructional strategy that aligns with and supports the learning objectives and the means for assessing those objectives

Victor and Candace’s main output for this phase of ADDIE will be a Course Design Document (CDD), which will:

* List all the learning objectives for the intended learning asset.
* Describe the methods by which the audience’s performance of the learning objectives will be assessed.
* Provide a high-level sequential outline of the objectives to be covered in the learning asset.
* Describe instructional methods that will be employed to enable learners to perform the learning objectives.

Ultimately, the CDD they develop will inform the Plan of Instruction (POI) and other documents such as the Individual Objective Assessment Plan (IOAP), which will be developed later in the process.

Case Study 2: Developing Learning Objectives

The Case

Victor, the Performance Learning Director (PLD), meets with Candace, the lead Instructional Systems Designer (ISD), and Lilly, the contract subject matter expert (SME), from the Functional Integrated Process Team (FIPT) to begin working on the CDD, the main output of the design phase of the ADDIE model. The first step in the Design phase involves creating **observable and measurable** objectives that will delineate what the learner will know or be able to do at the end of the instruction.

Candace begins working on the objectives for Contract Planning. As you will recall from Case Study 1, Victor, Candace, and Lilly identified the following desired competencies for Contract Planning:

* **Understand the policies pertaining to types of contracts that may be used in acquisition.**
* **Understand the policies pertaining to selecting contract types.**
* **Understand policies pertaining to fixed-price contracts.**
* **Understand policies pertaining to cost reimbursement contracts.**
* **Understand procedures for selecting contract types.**

Candace can now begin to write the learning objectives based on the desired performance competencies from the job task analysis. Candace intends to first develop terminal learning objectives (TLOs) in the topic of Contract Planning. In other words, the statements that she comes up with will describe what learners will know or be expected to do upon completing a full unit or lesson within the learning asset. Later, she will develop enabling learning objectives (ELOs), which will describe what learners will need to know or be expected to do in order to achieve the Contract Planning TLOs.

Lilly works with Candace in identifying broad areas of content they need to include in the learning asset to ensure the learner can achieve the desired competencies. Content related to the first desired performance outcome [**Understand the policies pertaining to types of contracts that may be used in acquisition**]will support one of the organization’s overall learning goals [**Contract planning**].

Included in Lilly’s list of necessary broad content are:

* Contracting policies
* Contracting and non-contracting methods for satisfying FAR requirements
* Acquisition methods and appropriate applications

Recall that a learning objective is a single statement describing what learners will know, understand, or be expected to do as a direct result of a learning asset’s intervention, and that the objective must be both observable and measurable. With these criteria in mind, Candace composes the following objectives using the standard **[The subject] will be able to [verb] the [object]** format:

* **The learner will be able to explain contracting policies that pertain to Federal Acquisition Regulations.**
* **The learner will be able to summarize methods that satisfy FAR requirements relative to contracting and non-contracting methods.**
* **The learner will be able to complete a graphical representation of appropriate acquisition procedures, including non-contracting alternatives.**

Now that she has the terminal objectives written, Candace considers where each objective lies on the Knowledge Dimension/Cognitive Process Dimension Table (Table 2.2.1).

Notice that the verbs used in the four terminal objectives are: ***“explain” “summarize,”*** and ***“complete.”*** All of these verbs are consistent with Bloom’s second level of cognition: *Understanding*. The first two competencies focus on the concepts that underlie specific policies. Therefore, these two objectives can be classified on the table below as being at conceptual knowledge level and at the cognitive level of understanding (cell B2).

The third objective, however, asks the learner to complete a graphical representation that visually represents procedures. This requires that the learner understand *procedures* rather than concepts. Therefore, the third objective can be classified as procedural knowledge at an understanding level (cell C2).

**Table 2.2.1**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Knowledge Dimension** | **Cognitive Process Dimension** | | | | | |
|  | *Remember* | *Understand* | *Apply* | *Analyze* | *Evaluate* | *Create* |
| *Factual Knowledge* | A1 | A2 | A3 | A4 | A5 | A6 |
| *Conceptual Knowledge* | B1 | B2 | B3 | B4 | B5 | B6 |
| *Procedural Knowledge* | C1 | C2 | C3 | C4 | C5 | C6 |
| *Metacognitive Knowledge* | D1 | D2 | D3 | D4 | D5 | D6 |

Candace knows from the learner analysis that she cannot assume that the targeted audience has relevant factual knowledge. She makes a note that she will have to accommodate this when developing her ELOs. Since the target cognitive process dimension is at Level 2 (*Understanding*), the ELOs will need to target learners at *remembering* conceptual and procedural knowledge, the lowest level of cognitive processing for these two knowledge dimensions (B1 and C1, respectively).

Candace now consults Victor and the FIPT to validate the objectives she has written. During the validation process, the objectives are judged against the criteria in Table 2.2.2. By evaluating Candace’s objectives according to these criteria, Victor and the other members of the FIPT are able to validate the TLOs that she has developed so far.

|  |  |
| --- | --- |
| **Criteria for Validating a Learning Objective** | **Yes or No** |
| The objective states or reasonably implies the target audience. | Yes |
| The objective identifies an action for the audience to demonstrate. | Yes |
| The objective describes an object of the action that learners will be expected to demonstrate. | Yes |
| The action identified in the objective is one that an instructor can observe and measure in an assessment. | Yes |
| The cognitive process involved in demonstrating the learning objective is appropriate for the target audience. | Yes |
| The object of the learning objective adequately reflects the knowledge dimension of the task. | Yes |

As Candace proceeds with developing learning objectives, she will see to it that the objectives she creates continue to build upon each other and remain grounded in data gathered in the analysis phase. The relationship between learning objectives and analysis phase data is summarized in the following flow chart:

**Fig. 2.2.1**

**Needs Analysis:** Identifies instructional goals of the organization

e.g., **[*Contract Planning*]**

**Job Task Analysis:** Identifies ***performance competencies*** that support the instructional goals of the organization.

e.g., *[****Understanding poli*cies pertaining to *selecting contract types]***

**Informs**

**Supports**

**Terminal learning objective (TLO):** a statement that describes what learners will know or be expected to do upon completing a learning asset or after completing a full unit or lesson within the learning asset.

e.g., [***The learner will be able to explain contracting policies that pertain to Federal Acquisition Regulations.]***

**Informs**

**Supports**

**Enabling learning objective (ELO):** a statement that describes what learners must know or be able to do in order to achieve a TLO.

e.g.,

* ***The learner will recognize the policy governing a fixed price contract and a cost reimbursement contract.***
* ***The learner will list the characteristics of a fixed price contract and a cost reimbursement contract.***
* ***The learner will recall the definitions of a fixed price contract and of a cost reimbursement contract.***
* ***The learner will name the two broad categories of contracts that may be used in acquisitions.***

**Supports**

**Informs**

**Informs**

**Informs**

**Informs**

**Supports**

**Supports**

**Supports**

Focus of Analysis

Explain how each step in the process of developing objectives is informed by the step before and is supportive of the step before.

Analysis Prompts

* How does the Analysis phase inform the development of terminal learning objectives?
* How do terminal learning objectives support the Analysis phase and inform enabling learning objectives?
* How do enabling learning objectives support terminal learning objectives?

Analysis Guide

How does the Analysis phase inform the development of terminal learning objectives?

The analysis phase of the ADDIE model produced three critical analyses:

* The needs analysis identified performance gaps that formed the basis for the learning goal of the organization. Everything that comes after this must support this goal.
* The job task analysis identified desired performance competencies that were developed from the information gleaned in the needs analysis. Each performance competency supports the organizational learning goal.
* The outcome of the needs analysis is hierarchically superordinate to every other aspect of the ADDIE model. It directly drives the task analysis, which is hierarchically below the needs assessment. Information from the task analysis then drives the formation of terminal learning objectives.
* The learner analysis identified characteristics that affect the learning asset. These data provide information about the appropriate cognitive levels for which the objectives must be written.

How do terminal learning objectives support the Analysis phase and inform enabling learning objectives?

Terminal learning objectives are derived directly from the desired performance competencies identified in the job task analysis. Think of working from the apex of a triangle downward. The desired performance competencies are above the TLOs, so the terminal objectives must act to support the desired performance competencies. TLOs can do this easily because they take the information directly from the desired performance competencies and translate them into statements of what the learner will know or be able to do. Once the TLOs have been developed, they then inform the enabling learning objectives, which are the most basic level of performance supporting the instructional goals of the learning asset.

Goals

Desired

Performance Competencies

Terminal Learning Objectives

Enabling Learning Objectives

Support

Inform

How do enabling learning objectives support terminal learning objectives?

Terminal learning objectives describe what learners will know or be expected to do upon completing a learning asset, or after completing a full unit or lesson within the learning asset. Enabling learning objectives support the terminal learning objectives by specifying what the learner must know or be able to do to achieve the terminal learning objective.

It is important to note that the components of the Analysis phase and the development of objectives are interlocked in a pattern of informing and supporting:

* The failure of a superordinate part to inform the subordinate part results in failure of the learning asset.
* The failure of the subordinate part to support the superordinate part results in failure of the learning asset.