**Defense Acquisition University**

**FPD 200 Participant Guide**

**Module 2, Lesson 2 (Learning Objectives)**

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Lesson Snapshot 1

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Lesson Snapshot

Topics for This Lesson

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| * Learning Objectives * Revised Bloom’s Taxonomy * Cognitive Processes * Observable and Measurable Learning Behaviors * Knowledge Dimensions * Terminal Learning Objectives (TLOs) * Enabling Learning Objectives (ELOs) |

What You Will Be Able to Do

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| * Lesson TLO: Produce a set of learning objectives for a selected learning asset based on analysis phase data. * ELOs for this lesson:  1. Recall the definition of a learning objective. 2. Recognize the parts of a learning objective. 3. Cite general characteristics that apply to all learning objectives. 4. Summarize how analysis phase data informs learning objectives in the context of the ADDIE model. 5. Recognize the six cognitive process categories described in the revised version of Bloom’s Taxonomy and their respective descriptions. 6. Classify the six cognitive process categories, from simplest to most complex. 7. Compare cognitive processes to their associated actions. 8. Summarize how an action should be defined in a sample learning objective, according to cognitive level. 9. Recognize the four knowledge dimensions in the revised version of Bloom’s Taxonomy and their respective descriptions. 10. Interpret how knowledge dimensions align with cognitive processes in a learning objective. 11. Summarize how an object should be defined in a sample learning objective, according to cognitive level. 12. Assess a learning objective based on validating criteria. 13. ~~Recall the definition of a terminal learning objective (TLO).~~ 14. ~~Recall the definition of an enabling learning objective (ELO).~~ 15. Differentiate between TLOs and ELOs. |

Assessment

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| The assessment for this lesson will consist of:   * A lesson quiz in which you will be expected to demonstrate all of the stated ELOs for this lesson. * A writing assignment in which you will be expected to produce a set of learning objectives for a selected learning asset with an accompanying explanation of how these objectives reflect analysis phase data and meet validating criteria. |

Section 1: Introduction

DAU instructional designers may be tasked with developing any of a number of different types of learning assets, ranging from complete certification and performance support courses to individual Continuous Learning (CL) modules to various types of knowledge sharing assets, such as podcasts or mobile games. What all of these assets share in common is that they are all designed and developed based on a set of learning outcomes known as *learning objectives*.

The process of developing the objective precedes everything else in the design phase, since an instructional designer needs to clearly articulate the goals of the learning asset before defining strategies for achieving and assessing learner mastery of those goals. In this lesson, we will discuss how learning objectives are developed to address needs and goals identified in the analysis phase by stating the learning behaviors an audience is expected to demonstrate based on what they already know.

Section 2: What Is a Learning Objective?

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| **ELOs for This Section**   1. Recall the definition of a learning objective. 2. Recognize the parts of a learning objective. 3. Cite general characteristics that apply to all learning objectives. |

To begin with, what is a learning objective?

* **Definition:** 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.

In other words, learning objectives define the specific learning outcomes of a learning asset and communicate these outcomes to the target audience of a learning asset – instructors and learners. They are fundamental to the design of a learning asset because they provide the basis for all assessment and instruction contained in it. Without learning objectives, the instructional designer has no explicit basis for the choices he or she makes in the subsequent design and development of a learning asset. Therefore, learning objectives must be developed before any assessments are developed, instructional methods are selected, or content is written.

Note that learning objectives are not intended to be theoretical. Instead, each learning objective describes an *observable* and *measurable* behavior that learners will be expected to demonstrate and instructors will be expected to assess as a direct result of the learning asset. The observable and measurable qualities of learning objectives allow instructional designers to define concrete learning outcomes and, subsequently, to determine instructional methods and materials to support those outcomes. It is perhaps the most important feature of learning objectives, and one that we will recall frequently through the rest of this lesson.

Learning objectives are all written according to a common subject-verb-object structure:

* [The subject] will be able to [verb] the [object].

The parts of a learning objective can be defined as follows:

* *Subject:* This part defines the target audience of learners. It should clearly identify who will be expected to demonstrate the intended action or behavior in the objective. This section is often omitted when multiple learning objectives are listed in a learning asset, since the audience is the same for each objective and can be implied in context.
* *Verb:* This part identifies the action or behavior that the audience will be expected to demonstrate. It is essential that this part define an action that can be clearly observed by an instructor and measured in an assessment.
* *Object:* This part defines the specific content that the audience is expected to demonstrate.

To understand how the parts of a learning objective function, it is helpful to examine one of the learning objectives for this lesson:

* *[FPD 200 participants will be able to] recall the definition of a learning objective.*

A few things to note about this objective:

* The subject of the objective – FPD 200 participants – is clearly defined. However, it is in brackets because it can be implied when the objective is listed with other objectives for this lesson. For this reason, notice that the subject does not appear in any of the objectives listed at the beginning of this lesson or this section.
* The objective was defined as a desired outcome prior to this lesson’s development. Therefore, it dictated that this piece of content be written, not the other way around – the course content *did not* dictate the learning objective.
* The objective describes an *observable* and *measurable* behavior. In other words, it is possible for an instructor to prompt you and observe whether you – an FPD 200 participant – can recall the content specified in this objective: the definition of a learning objective that is presented in this section. And, when you take the quiz for this lesson, your observable ability to recall this definition can and will be measured.

Therefore, in this section, we have identified some general characteristics of learning objectives:

* Learning objectives share a common subject-verb-object structure.
* All learning objectives should describe a behavior that learners are not able to demonstrate without the intervention of the learning asset.
* Learning objectives dictate all the choices that are made in the design and development of a learning asset. Therefore, they are developed before any part of the asset is defined or created.
* Every learning objective must be *observable* and *measurable* by an instructor or other individual charged with assessing learners’ mastery of the learning asset.

In the following sections, we will learn how an instructional designer defines the learning behaviors described in an objective. First, however, we must consider what information learning objectives should be based on.

Section 3: How Does the Analysis Phase Inform the Development of Learning Objectives?

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| **ELOs for This Section**   1. Summarize how analysis phase data informs learning objectives in the context of the ADDIE model. |

Learning objectives do not arise out of thin air. There needs to be some basis for the outcomes that a learning asset will support. These outcomes should be specifically based on data collected in the analysis phase of ADDIE.

In the previous module, we covered three main outputs of the analysis phase: needs analysis, job task analysis, and learner analysis. These sources provide the following general types of information on which to base learning objectives:

* *Needs Analysis:* This output may include one or more overall instructional goals that the learning asset will need to support. It may also identify specific performance gaps that require intervention by the learning asset.
* *Job Task Analysis:* This output lists particular job task competencies, including competencies developed and approved by the Functional Integrated Process Teams (FIPTs), which learners may be expected to demonstrate as a result of the learning asset.
* *Learner Analysis:* This output defines the audience for the learning asset, which will be the subject for all the learning objectives that are developed for that asset. Additionally, the learner analysis should describe any of the audience’s prerequisite knowledge and skills that may support their mastery of the learning asset, including content that they have mastered in prerequisite courses. This information will help determine the level of knowledge and skills that will be expected of learners in performing the learning objectives.

An instructional designer at DAU may not have all of the analysis phase outputs cited above when he or she begins the design phase. Nevertheless, it is the instructional designer’s job to synthesize whatever data he or she has collected in the analysis phase into a list of concise statements that describe what the target audience will know or be expected to do as a result of the learning asset, based on what they already know.

To better understand how data from analysis phase outputs informs the development of learning objectives, imagine that you were the instructional designer responsible for developing FPD 200. You collected the following pieces of data from the analysis phase:

* Your needs analysis identified a primary instructional goal of having target learners fully understand all phases of the ADDIE process. It also noted a specific need – your target audience needs to understand how information from analysis phase outputs informs the development of learning objectives.
* One of the target competencies identified in the job task analysis you received for the projected learning asset is the ability for DAU learning asset managers (LAMs) to be able to develop valid learning objectives.
* Research that you conducted on learner characteristics indicates that your target for FPD 200 consists primarily of Course Managers, Course Manager Regional Representatives, and Performance Learning Directors. This audience has received no presumed prerequisite knowledge and no prerequisite instruction on the ADDIE model or the development of learning objectives in any of the FPD courses they have previously taken.

Based on this information, what conclusions would you come to as an instructional designer?

* Your learner analysis fully defines the audience of participants for FPD 200. Therefore, you can now conclude that you have a basis for identifying the subject of your learning objectives: *FPD 200 participants will be able to* \_\_\_\_\_\_\_\_\_\_ *the* \_\_\_\_\_\_\_\_\_\_\_*.*
* However, the job task analysis states that your audience should be able to develop valid learning objectives. A major part of developing learning objectives is understanding how information from analysis phase outputs informs the development of learning objectives. This is a specific need called out in the needs analysis, and it supports the overall instructional goal of getting learners to fully understand the ADDIE process.
* Your learner analysis gives reason to conclude there is a likely performance gap: your audience has no presumed knowledge or prerequisite instruction in developing learning objectives. Therefore, they will likely lack an adequate understanding of how analysis phase outputs inform learning objectives. This will prevent them from developing valid learning objectives as specified in the job task analysis.

It is clear from the analysis phase outputs that your learning asset will need to support learners in understanding how analysis phase data informs the development of learning objectives. The learning objective that you develop to address this need must define the specific learning behavior that FPD 200 participants will be expected to demonstrate in order for an instructor to observe and measure their understanding. Defining this behavior requires two things of the instructional designer: defining an action that is achievable for the learner and identifying the specific content that the action will demonstrate.

Section 4: How Do I Define What Learners Should Do in a Learning Objective?

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| **ELOs for This Section**   1. Recognize the six cognitive process categories described in the revised version of Bloom’s Taxonomy and their respective descriptions. 2. Classify the six cognitive process categories, from simplest to most complex. 3. Compare cognitive processes to their associated actions. 4. Summarize how an action should be defined in a sample learning objective, according to cognitive level. |

Defining a specific action that your audience will need to demonstrate as a result of your learning asset is no trivial task. First, the action must be expressed as a verb in a learning objective that learners can clearly demonstrate and that instructors can observe and measure. Second, it must reflect a level of thinking and understanding that is appropriate for the target audience, based on their existing knowledge and skills. You may have an idea of the types of things your target audience will be expected to do based on information from your analysis. However, at this point, it is not yet clear how simple or complex the thinking involved in these tasks is, or whether the tasks can expressed as observable and measurable behaviors.

Resolving both of these issues requires that the instructional designer know something about *Bloom’s Taxonomy*.

* **Bloom’s Taxonomy:** A system for developing and classifying learning objectives according to the level of cognition and knowledge that they require.

Bloom’s Taxonomy was originally designed just after World War II as a way to support the development of valid and reliable criteria for university course examinations. It described six cognitive process categories – or different levels of thinking – that could apply to any learning objective used as testing criteria. The idea was to classify all the varying levels of complexity that learners demonstrate, from simplest to most complex. The goal was to ensure that instructional materials and assessments were aimed at the appropriate level and supported increasingly complex thinking. The original Taxonomy was revised by a team of educational experts in 2001. We will be citing the revised version of Bloom’s Taxonomy in this course.

There are six cognitive process categories defined in the revised version of Bloom’s Taxonomy. From simplest to most complex, these categories are:

* *Remember:* The most basic and fundamental level of cognition in which learners simply recall or recognize facts or information.
* *Understand:* The level of cognition in which learners grasp the meaning of information and can re-articulate it, explain it, or provide examples.
* *Apply:* The level at which learners use information to solve routine problems, applying information in different contexts.
* *Analyze:* The ability to break a concept down to its constituent parts to see how it is organized, understand its association with other elements, identify its effects, and generalize or make conclusions about it.
* *Evaluate:* This level involves judging the merits of ideas, solutions, methods, etc., building on the mental skills developed in the other cognitive levels.
* *Create:* The highest level of cognition at which learners assemble and combine old information with new information to produce a new result, structure, or pattern.

The hierarchical nature of Bloom’s Taxonomy is crucial to the organization and structure of all actions defined in learning objectives. One cannot expect learners to analyze information if they do not know it or do not understand it. Similarly, learners cannot be expected to evaluate an argument if they have not analyzed its components. An instructional designer must be certain that his or her audience has achieved the most basic levels of learning on a subject before proceeding to higher levels.

There is also a set of demonstrable behaviors associated with each cognitive process. The following table presents a very concise list of verbs that reflect these behaviors according to the respective cognitive processes that they demonstrate (for additional verbs, see the “Writing Learning Objectives” guide in the References section in Blackboard).

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| **Cognitive Process** | **Associated Behaviors** |
| Remember | * Recognizing * Recalling |
| Understand | * Interpreting * Exemplifying * Classifying * Summarizing * Inferring * Comparing * Explaining |
| Apply | * Executing * Implementing |
| Analyze | * Differentiating * Organizing * Attributing |
| Evaluate | * Checking * Critiquing |
| Create | * Generating * Planning * Producing |

Note that each of the verbs listed in the “Associated Behaviors” column in the table above is an action that is *observable* and *measurable* by an instructor. For example, it is possible to observe and measure how well a learner is able to compare two different concepts or critique an argument based on a set of standards. Consequently, any of these verbs would be appropriate to include in an action statement in a learning objective.

In contrast, some of the verbs used in learning objectives are not *observable* and *measurable* behaviors – i.e., it is not possible to observe and measure how well a learner *understands* a given piece of information, since understanding is an internal process that takes place in the learner’s mind. Any process that is *not* observableand measurableis **not** appropriate for inclusion in the action statement of a learning objective – i.e., an objective should never say “The learner will UNDERSTAND…” or “The learner will REMEMBER…” since there is no way for the instructor to observe and measure how the student is understanding or remembering something.

Here is a list of verbs to avoid in learning objectives because they cannot be observed and measured by an instructor:

* Understand
* Remember
* Comprehend
* Learn
* Know
* Contemplate
* Perceive
* Enjoy
* Consider
* Experience
* Appreciate
* Be familiar with

Remember – the object of writing a learning objective is to describe a behavior that will guide the design and development of a learning asset as well as communicate the expected outcomes of a learning asset to instructors and learners. If your desired action does not meet these criteria in an observable and measurable way, you should find a verb that expresses the desired learning outcome in a way that can be observed and measured.

In order to understand how Bloom’s Taxonomy helps define what learners are expected to do, let’s return to our example from the previous section. We were analyzing how a learning objective for FPD 200 was developed based on data from the analysis phase. We specifically concluded that our analysis phase identified a performance gap: the learning asset that we are creating needs to support learners in understanding how analysis phase data informs the development of learning objectives.

Notice that the word “understanding” is underlined in the previous sentence. This is because it corresponds to the second cognitive process category defined in Bloom’s Taxonomy: *understand*. This seems to indicate that it is the cognitive process that learners will need to exercise.

Is *understanding* an appropriate cognitive process for the target audience? It requires slightly more complex thinking than the lowest level of cognition – *remembering*. However, as long as we can expect learners to understand the analysis phase from the first module of FPD 200 and to recognize the parts of a learning objective from the beginning of this lesson, it is reasonable to assume that they are capable of understanding how analysis phase outputs inform the development of learning objectives. However, we cannot assume that our target audience could exercise higher-level cognitive processes that relate analysis phase data to learning objective development at this point because we determined that they have no presumed background in the ADDIE model or the development of learning objectives. Therefore, it would be unreasonable, for instance, to expect our audience to *evaluate* or *create* a learning objective based on analysis phase data until we first establish that they understand how those two concepts relate.

But, as we mentioned before, understanding is not an observable and measurable behavior. We need to find a verb that represents an action that will demonstrate FPD 200 participants’ understanding of this concept. Many of the behaviors associated with understanding in the table above could reasonably work. Here the instructional designer can exercise professional discretion and select the behavior that he or she feels will best demonstrate the desired understanding. In this case, we selected “summarize” because we felt that a summary of the concept would adequately demonstrate FPD 200 participants’ understanding of the concept.

This means that we have a verb to fill in the second part of our learning objective:

* FPD 200 participants will be able to *summarize* the \_\_\_\_\_\_\_\_\_\_\_.

Now that we have defined an action for our verb, we know that whatever asset we ultimately create will need to provide learners with sufficient support so that they can ultimately *summarize* how analysis phase data informs the development of learning objectives.

Any learning asset will likely define a diverse set of learning outcomes, reflecting a range of cognitive process categories. More specifically, at DAU, it is commonly believed that learning objectives for 200- and 300-level courses must all reflect higher cognitive levels. This is untrue. It is perfectly appropriate to include lower-level behaviors even in higher-level courses as long as they support learners in achieving desired instructional goals and competencies. In general, it matters more that an expected outcome address the desired goals and competencies of the proposed learning asset according to learners’ prerequisite knowledge and skills than it does that they reflect a prescribed cognitive level.

At this point, though, we still have not explicitly defined what content learners are supposed to summarize in our objective. Defining the content that learners are expected to know will allow us to fill in the *object* part of the learning objective statement and complete it. However, this will require us to reflect on what *dimension of knowledge* learners need to exercise.

Section 5: How Do I Define What Learners Should Know in a Learning Objective?

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| **ELOs for This Section**   1. Recognize the four knowledge dimensions in the revised version of Bloom’s Taxonomy and their respective descriptions. 2. Interpret how knowledge dimensions align with cognitive processes in a learning objective. 3. Summarize how an object should be defined in a sample learning objective, according to cognitive level. |

The object part of the learning objective reflects the knowledge that learners will be expected to demonstrate. In general, there are four different types of knowledge according to the revised model of Bloom’s Taxonomy:

* Factual Knowledge: Knowledge of factual information, such as terminology or specific details and elements.
* Conceptual Knowledge: Knowledge of concepts or ideas, such as classifications and categories; principles and generalizations; and theories, models, and structures.
* Procedural Knowledge: Knowledge of procedures, such as subject-specific skills and algorithms, subject-specific techniques and methods, and criteria for determining when to use appropriate procedures.
* Metacognitive Knowledge: Knowledge of the process of thinking through and processing information, including strategic knowledge, knowledge about cognitive tasks, and self-knowledge.

These four types of knowledge are known as *knowledge dimensions*. Understanding the knowledge dimension of a learning objective gives a more specific understanding of the behavior that learners will be expected to demonstrate. In particular, knowledge dimensions align with cognitive processes to provide the instructional designer with clear insight into the learning outcome.

The relationship between the knowledge dimensions and the cognitive processes in Bloom’s Taxonomy can be represented in the following table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **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 |

As you can see, the knowledge dimension and the cognitive process dimension align in the cells, revealing the type of task that a learning objective is demanding of the learner. For example, cell A1 identifies a learning objective in which learners are expected to remember some piece of factual knowledge – such as the fact that the Declaration of Independence was signed on July 4, 1776. On the other hand, cell D6 would be a learning objective in which learners are expected to create a piece of metacognitive knowledge, such as a memoir.

Where would the learning objective we have been analyzing as an example fit in this table? So far, we have the following objective:

* “FPD 200 participants will be able to *summarize* the \_\_\_\_\_\_\_\_\_\_\_.”

As we discussed in the previous section of this lesson, “summarize” is a behavior that reflects the cognitive process of *understanding*. Therefore, it belongs in the “Understand” column.

Specifically, we want our learners to summarize a particular piece of content: how analysis phase data informs the development of learning objectives. What knowledge dimension does this piece of content reflect? Let’s consider the options.

* Factual Knowledge: Having learners summarize how the analysis phase informs the development of learning objectives is *not* a task requiring learners to exercise knowledge of terminology or specific details or elements. Therefore, it does not belong in the knowledge dimension.
* Conceptual Knowledge: The task of summarizing how the analysis phase informs the development of learning objectives *is* primarily a conceptual task because it relates to the ADDIE model. Learners need to have an idea of how information generated in analysis phase outputs can be incorporated into a learning objective statement within the model. The content of our objective, therefore, belongs in cell B2 in the table above. Our task is clearly asking learners to *understand conceptual knowledge*.
* Procedural Knowledge: There is no clear technique or process entailed in our desired learning outcome. Instead, we want learners to demonstrate a broader idea of the relationship between analysis phase outputs and learning objectives within the context of the ADDIE model. Therefore, our objective does not belong to the knowledge dimension.
* Metacognitive Knowledge: Although the process of developing a learning objective entails an understanding of different cognitive levels, our desired performance outcome has less to do with metacognitive knowledge than it does with a general understanding of how analysis phase data can be incorporated in a learning objective. Therefore, it does not belong in this knowledge dimension.

We have now determined is that we expect our audience to *understand conceptual knowledge*. This gives clear insight into both the cognitive and knowledge dimensions of our learning objective. Based on this understanding, we know that our learning asset will need to support understanding of how analysis phase outputs inform learning objectives within the broader concept of the ADDIE model. Further, we should make sure that learners are called on to demonstrate a conceptual understanding of this topic in the assessment for this lesson.

We can now define the rest of our learning objective. Specifically, since we have determined that the content in our objective reflects a conceptual understanding in the context of the broader ADDIE model, we will specifically call this out in the object part of our statement.

* “FPD 200 participants will be able to summarize how analysis phase data informs learning

[subject] [verb] [object]

objectives in the context of the ADDIE model.”

Since the subject of this objective is common to all the other objectives in the course and can be implied by instructors and learners in context, the objective can be shortened to: “*Summarize how analysis phase data informs learning objectives in the context of the ADDIE model.*”

Section 6: How Do I Validate a Learning Objective?

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| **ELOs for This Section**   1. Assess a learning objective based on validating criteria. |

We now have a learning objective based on needs, goals, and learner characteristics defined in the analysis phase. But is it a valid objective?

Before adopting any learning objective for a learning asset, the instructional designer needs to make sure that the objective meets standard criteria, reflective of the best practices for learning objective development that we have covered in this lesson. These criteria are summed up in the following table:

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

Let’s apply these criteria to the learning objective we just developed to see whether it is valid.

* *The objective states or reasonably implies the target audience:* Our learning objective does not state the subject directly. However, it is reasonable to assume that our audience – FPD 200 participants – can be implied in context. Further, this audience was clearly defined as consisting of Course Managers, Course Manager Regional Representatives, and Performance Learning Directors in our learner analysis.
* *The objective identifies an action for the audience to demonstrate:* Our learning objective does state an action for participants to demonstrate as a direct result of our learning asset’s intervention: “to summarize.”
* *The objective describes an object of the action that learners will be expected to demonstrate:* The object of FPD 200 participants’ summary will be “how analysis phase data informs learning objectives in the context of the ADDIE model.”
* *The action identified in the objective is one that an instructor can observe and measure in an assessment:* This objective indicates that FPD 200 participants will be expected to produce a summary of the process of translating information from the analysis phase into a learning objective. This is an outcome that can be directly observed and measured by an instructor, in contrast with “understanding” or “knowing” the content. Therefore, it meets this criterion.
* *The cognitive process involved in demonstrating the learning objective is appropriate for the target audience:* Our needs analysis and job task analysis indicated that there was a need for the audience to understand how information from the analysis phase informs the development of learning objectives in order to eventually create their own learning objectives. Further, our learner analysis determined that our target audience has no prior background in this subject. We concluded that our target audience needed to demonstrate a basic understanding of this relationship before they could demonstrate higher-level cognitive processes, such as creating their own objectives. Since “summarizing” is a behavior that demonstrates basic understanding, it is clear that our objective meets this criterion.
* *The object of the learning objective adequately reflects the knowledge dimension of the task:* We determined that learners were specifically expected to understand the concept of how analysis phase data informs the development of learning objectives in the context of the ADDIE model. This correlates to the conceptual knowledge dimension in the revised version of Bloom’s Taxonomy, and it is reflected in the object portion of the objective. We can therefore say that it meets this criterion.

We now have a validated learning objective. Obviously, this particular learning objective is one of the objectives that guided the design and development of content in this lesson. At this point, instructional designers can feel confident in pursuing the validated objective in the subsequent design and development of the learning asset.

The list of learning objectives that a DAU curriculum development team develops for a learning asset may be long or short. However, each one of them should follow the subject-object-verb structure that we have demonstrated in this lesson, and it should meet all the criteria listed in the checklist above. Any objectives that do not meet all the criteria in this checklist should be rewritten until they do.

As previously noted in this lesson, one of the important roles of a learning objective is to provide an item for measuring the target audience’s knowledge of a particular piece of content in an assessment. For example, as an FPD 200 participant, this objective indicates what you will be expected to summarize: how analysis phase data informs the development of learning objectives in the context of the ADDIE model. You can likely expect that this task will appear in some form in this lesson’s quiz.

Determining the assessment methods that you will employ for a learning asset based on the learning objectives is the next step in the design phase of the ADDIE model. This step – called developing an *assessment strategy* – is the subject of this module’s next lesson.

Section 7: How Are Learning Objectives Classified?

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| **ELOs for This Section**   1. Differentiate between TLOs and ELOs. |

Not all learning objectives are created equal.

* Some objectives describe the final outcome of a level of instruction.
* Some objectives describe learning behaviors that support the final outcome.

The different types of learning objectives just described comprise two distinct learning objective categories: *terminal learning objectives* (TLOs) and *enabling learning objectives* (ELOs), respectively.

* A terminal learning objective (TLO) is 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.
* Enabling learning objectives (ELOs) are statements that describe what learners must know or be able to do in order to achieve a TLO.

It is helpful to look at the learning objectives for this course to understand how objectives can be classified according to ELOs and TLOs. Specifically, based on our analysis, we determined that FPD 200 participants would need to create a set of learning objectives as a culminating activity that reflected the overall instructional goal for this lesson. This led us to develop the following TLO for this lesson:

* “Produce a set of learning objectives for a selected learning asset based on analysis phase data.”

Notice that this objective calls on learners to “produce” – or create – something. Creation is the highest level of cognition defined by Bloom’s Taxonomy. Typically, an instructional designer cannot expect learners to be able to demonstrate this cognitive level unless they have mastered knowledge and skills in lower cognitive domains. Therefore, our other objectives for this lesson needed to enable learners to work their way up to this TLO from what they already know.

Learners need to demonstrate a prerequisite set of knowledge and skills in order to achieve this objective. For example, they need to demonstrate that they know what a learning objective is before they can create one. They also need to understand the process of translating analysis phase data into learning objectives before they can demonstrate the TLO.

Therefore, we developed a set of ELOs for this lesson to ensure that participants would be able to achieve the TLO. These ELOs included the following objectives:

1. Recall the definition of a learning objective.
2. Recognize the parts of a learning objective.
3. Cite general characteristics that apply to all learning objectives.
4. Summarize how analysis phase data informs learning objectives.
5. Recognize the six cognitive levels described in the revised version of Bloom’s Taxonomy and their respective descriptions.
6. Classify the six cognitive levels, from simplest to most complex.
7. Compare cognitive processes to their associated actions.
8. Summarize how an action should be defined in a sample learning objective, according to cognitive level.
9. Recognize the four knowledge dimensions in the revised version of Bloom’s Taxonomy and their respective descriptions.
10. Interpret how knowledge dimensions align with cognitive processes in a learning objective.
11. Summarize how an object should be defined in a sample learning objective, according to cognitive level.
12. Assess a learning objective based on validating criteria.
13. Recall the definition of a terminal learning objective (TLO).
14. Recall the definition of an enabling learning objective (ELO).
15. Differentiate between TLOs and ELOs.
16. Recognize where learning objectives appear in a DAU Plan of Instruction (POI).

As you can see, a long list of ELOs was required to support the TLO in this lesson, since our learner analysis indicated that our target audience had no presumed background in the ADDIE model or developing valid learning objectives. And obviously, FPD 200 consists of multiple TLOs – one for each lesson – with its own respective set of ELOs. The expansive nature of the topic – the ADDIE model and instructional design – necessitates that learners assimilate a good number of objectives. However, some learning assets may consist of only one TLO with a single set of ELOs. This is especially the case for knowledge sharing assets, such as standalone podcasts.

The process of organizing and sequencing TLOs and ELOs to support learners’ mastery in all types of learning assets takes place in the final part of the design phase – determining an *instructional strategy*. This will be the subject of the final lesson in this module.

Section 8: Where Do Learning Objectives Fit into the DAU Instructional Design Process?

At DAU, it is the job of the curriculum development development team to develop a set of learning objectives for a learning asset. For some curriculum areas, the FIPT approves these objectives. The process of developing and validating objectives involves the full collaboration of the Instructional System Design (ISD) lead and the subject-matter experts on the team. Finalized objectives are eventually encoded in Part 4 of the Program of Instruction (POI). Part 4 of the POI is called the Individual Objective Assessment Plan (IOAP).

In the case study for this lesson, you will read an example of how the Instructional System Designer (ISD) and Performance Learning Director (PLD) collaborate to translate information that they collected in their analysis phase into a set of validated learning objectives to include on their IOAP. This case study is intended to provide you with a DAU-specific example of how the topics covered in this lesson of the guide are applied in the development of a learning asset.

Where are the instructions for doing the objective development assignment?