

Module 4: Design (P2: Assessment)



This document contains the content from the interactive instructional unit for the module.

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Introduction



Thus far in the instructional process, you have analyzed the learner and the context, completed a task analysis, and written a goal statement and corresponding objectives. The next step is to plan and to design the assessment. In this unit we will focus on how to construct assessments to measure the instructional objectives.

Objectives

By the end of this unit , you should be able to:

Unit Objectives:

- Describe important aspects to consider when designing assessments for the distance education environment
- Create assessments that align with instructional objectives and that are appropriate for the distance education environment and learners' developmental stage



By the end of this unit, what would you like to learn? Write your personal objectives.

Personal Objectives:

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Types of Assessments

The objectives describe where you plan to go, and the assessment determines if you got where you planned to go. Thus, assessments should stem directly from the objectives. The objectives provide the content for the assessment. Another way to say this is that there should be congruence between the objective and the assessment; however, before we discuss congruence further, let's briefly review types of assessment.

In instructional design, the criterion-referenced assessments are used. Criterion-referenced assessments directly measure whether or not a criteria has been achieved rather than compare learners' performance based on a norm group (e.g. norm-reference assessment; SAT; ACT). Dick, Carey and Carey (2005) discuss four different types of criterion-referenced assessment useful for instruction:

“If it’s worth teaching, it’s worth finding out whether the instruction was successful. If it wasn’t entirely successful, it’s worth finding out how to improve it” - *Making Instruction Work*, Mager, 1997, p. 83

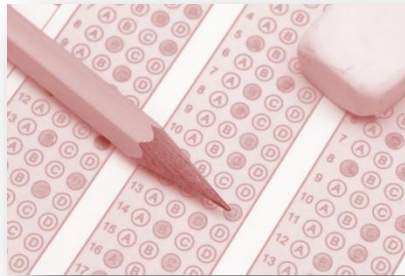
1. **Entry Assessment (also called diagnostic)** – an assessment given prior to beginning of instruction to assess learners’ mastery of prerequisite skills. This type of assessment may be used to determine if the learner is ready to begin the instruction.
2. **Pre Assessment** - an assessment given prior to beginning of instruction to assess learners’ mastery of skills within the instruction; thus, informing the instructor of skill and knowledge areas that need to be addressed more or less in-depth.
3. **Practice Assessment (also called formative)** – an assessment that occurs during instruction that provides the learner with corrective feedback from the instructor about how they are progressing toward the instructional objectives.
4. **Post Assessment (also called summative)** – an assessment that determine if learners achieved the objectives. If learners are not performing adequately, then there may be problem with the instruction.

In addition to identifying different types of assessment, Dick, Carey and Carey (2005) recognize that there are different assessment items. They purport that the wording of the objective should guide the selection of assessment item type. For example, if an objective is to *state the instructional design models*, a test that requires a fill-in-the-blank answer would be more appropriate than a multiple-choice question that requires a learner to choose the best answer from a list. Keep in mind that the farther removed the behavior in the assessment is from the behavior specified in the objective, the less likely you will be able to predict if learners can or cannot perform the objective.

Here is a list of assessments:

Traditional Assessments

- Test: Fill-in-the-blank
- Test: Completion
- Test: Multiple-choice
- Test: Matching
- Essay/ Paper



Authentic Assessments

- Live performance
- Demonstrations
- Project
- Portfolios

Can you think of others?

Congruence in Assessment and Objectives

Remember that the instructional design process is both iterative and systematic. Being systematic means that each step influences subsequent steps. Applied at this phase of design, the objectives influence the assessment. In fact, one of the most crucial aspects of designing assessments, as previously stated, is the evaluation of congruence between the assessment and the objectives. To ensure congruence in planning assessments, it is helpful to create a three column table with the skill/ step, the objective, and the assessment. See the example below:

Skill	Objective	Assessment
Evaluate media using usability and sustainability criteria. Select media that supports instructional tasks and objectives in a distance education course.	Using a media evaluation rubric, students will analyze an educational scenario and select the most appropriate media for accomplishing learning tasks and objectives.	Module Quiz (practice): Multiple choice case scenario question ISD Project (Post Assessment): Media Selection Portion



Think About it Activity 4.5

If intended outcome are higher order thinking outcomes, then the activities and assessment should not simply require the obtaining of information and the recall of information. Let's say that you are an instructional designer who is helping instructors put their course into a web-based environment that is mobile compatible. You are assisting an instructor in creating a counseling skills course. The instructor wants her students to meet the following objective: "Learners will demonstrate proficient listening and empathy skills." She decides that she will require video conferencing via Skype for didactic role play of a counseling session to practice listening and empathy skills. She is unsure how to assess the skill.

What would you suggest as an assessment that aligns with the objective?

- A. A multiple choice test
- B. A simulation in which students respond verbally to an avatar
- C. A DVD of a counseling session that uses the identified skill with a "client" actor

Answer: B or C would be appropriate. A would not be appropriate since you cannot demonstrate listening skills using a text-based test.

The Context of the Assessment

In addition to selecting assessments that align with the objectives, it is also important to consider the conditions in which the assessment will be completed. This includes the tools available (e.g. "conditions" component of the objective) as well as the environment (e.g. traditional, online, mobile). This is demonstrated in Activity 4.5. However, let's consider another scenario for a moment. How would you have an online student conduct a live demonstration or presentation? There are multiple options. For example, posting a student could complete a live demonstration by screen sharing or video during an e-conferencing session. A student could post a video or tutorial on a blog or upload it to the LMS through a submission link. If the file is too big, snail mail is always an option. The pro and cons of all methods would need to be considered. There are unique considerations for the distance environment. See the Think About It Activity 4.6.



Think About it Activity 4.6

Read the following quote:

Successful educational institutions in the future will of necessity integrate the worlds of education, work, and leisure with leading edge electronic technologies as they become available. The new model for educational activity will be that which is delivered by the institutions and acquired by the students in an anytime, anyplace, on-demand fashion. The educational institution of the future, at the post-secondary level at least, will not be a campus we drive through and view the ivy covered halls of wisdom, but it will be a learning experience we participate in while we drive along the highway, relax at home, work at our desks, fly to distant locations, collaborate with fellow learners, and accomplish all the other tasks required of us to be productive, useful, and educated citizens of the world. It will always be at our fingertips, or at least no more than a click away. One of the major challenges of this new “at-our-fingertips” learning environment is how to assess learner achievement in an online course in which learner and instructor seldom or never see each other in face-to-face contact. The assessment must be authentic as defined by Wiggins (1998), Bridges (1995) and others and must be effective in that it measures learning, engages the learner, is integrated into the learning process, and promotes further learning. The assessment paradigm developed as a result of this study will be a step forward. - Drummond, 2003

As in this quote, the literature has suggested that the evolution of mobile and online education has revolutionized and introduced challenges for assessment. What are those revolutions? What are the challenges? What is current online and mobile assessment methods being used and what is their effectiveness? Take a virtual fieldtrip to the library databases and identify several articles that address these questions. Then, reflect on the following: Based on your personal theory of learning, how should online learners be assessed? How is this congruent with what is understood, in the literature, about mobile and online education assessment?

Suggested key words for database search: online assessment; authentic assessment; online instructional design

Assessment Honesty and Security



Although numerous other issues could be discussed in regard to planning assessments, an age old issues that are worth noting include honesty and security issues. Cheating and plagiarism have been a concern in education for a long time. However, with the emergence of the internet plagiarism has become more prominent. Software tools such as SafeAssign, TurnItIn and iThenticate assist in reviewing students' works for plagiarism; plagiarism policies also assist in discouraging plagiarism, The LU policy states that a potential consequence of a first offense of plagiarism can be an FD.

In addition to academic honesty issues, another concern, although present in traditional education, that has received a lot of attention in distance education is student authenticity. How can an instructor be absolutely sure that the learner "on the other end" is the registrar learner? In the past, proctoring has been used to address this issue. Researchers and practitioner are currently experimenting with webcams and digital finger printing to heighten distance education assessment security. While planning assessments these issues should be considered and addressed where appropriate.

ISD Project: Plan the Assessments



Create a criterion-referenced assessment for each objective. The planned assessments should accurately assess the behavior of outlined in the objectives and provide the conditions stated in the objectives. As Johnson and Johnson (2002) suggest the assessment should be meaningful; that is, not only align with the objective, but also relevant to the learner, instructional content, and expected outcome. Additionally, best practices for the online or mobile environment should be taken into consideration. Only one assessment item is required to assess each objective; however, multiple assessments are also acceptable. And, one assessment may also assess several objectives. See Horton text on tests for some assessment ideas. A storyboard or course planning chart that clearly demonstrates how the objectives and assessments are aligned should be created.

Summary

You should now be able to:

- Describe important aspects to consider when designing assessments for the distance education environment



- Create assessments that align with instructional objectives and that are appropriate for the distance education environment and learners' developmental stage

Have you also met your learning objectives?

Personal Objectives:

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