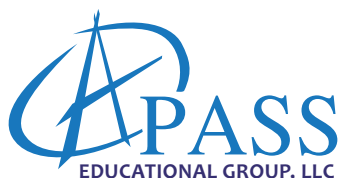# Using Assessment in E-Learning

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Assessments are critical elements of instruction; they determine accomplishment of lesson objectives. However, you can design assessments to be more than an evaluation of what has been learned. You can design them to be a part of the learning process itself.

—LuAnne Holder, "How to Design Assessments That Promote the Learning Process"

E-learning assessments have two primary purposes (as do any assessments): to help the manager or instructor identify how well learners have understood the course content, and to help learners consolidate their own knowledge and track their learning progress. With good instructional design practices, both purposes can be accomplished at the same time.

Assessments also can have significance outside the course or company setting. Very often, a passing grade is required to demonstrate to an outside auditor that an individual has reached a required level of ability. This is usually an element in qualification or certification programs, and it may be mandated by a company's policy or even by law. (LeGault, 2015a)

Defining Learning Objectives

Creating assessments that are useful to all involved begins with clear, measurable learning objectives. Objectives may be knowledge-based or performance-based, and most courses involve both kinds. For instance, a training module for customer service representatives at a call center would most likely include detailed information about the company's products and services as well as tactics and scripts to help customers in a way that management requires. (Kuhlman, 2014)

The learning objectives for such a module should be precisely worded so that learners' understanding can be fairly and accurately assessed. Something like "Representative will understand the company's desire to have 100-percent satisfied customer base" is a laudable goal, but it is not measurable. In order to have good assessments, the goal should be broken down into specific objectives and sub-objectives, which are actions the representative can take to reach the main goal of customer satisfaction:

- **Objective:** Representative will complete customer calls within five minutes.

  - **Sub-objective 1:** Queue each call as it enters system.

  - **Sub-objective 2:** Access customer account before engaging customer.

  - **Sub-objective 3:** Determine customer need, open correct screen, and resolve customer request.

  - **Sub-objective 4:** Suggest other options that customer may want to take advantage of.

  - **Sub-objective 5:** Affirm that customer request was met.

Choosing Points of Assessment

Most instructors recognize that assessment needs to be done at the beginning, during, and after a course.

At the beginning: A quick assessment can give learners a hint of the course content and its difficulty, letting them know the effort they will need to succeed. It can also pique their interest about the concepts they will be learning. Instructors can use a pretest to measure what learners know on entering the course, which will help determine what they learned as a result of the course. Finally, a pretest gives learners the opportunity to show that they already know the content, allowing them to skip the initial content and move on to modules more suited to their needs.

During the course: Assessments (or knowledge checks) can serve as gatekeepers and directional markers throughout a course. After a chunk of information is presented, a short quiz (even a single question!) checks the learner's understanding of what was presented as well as reinforces the main ideas of the content. Learners who answer correctly move on; those who don't can be routed back to review the material.

At the end: Final assessments are great opportunities to wrap up the learning that took place. Besides assessing what level of mastery the learner has achieved, they serve the instructor or administrator by assessing the usefulness of the course. Final assessments help the course creator make changes in the course to provide better instruction that will result in improved learner outcomes. (Enders, 2015)

Creating Assessments

Questions for any assessment should align with the course objectives. The goal is to assess how well learners mastered the course content, and so the format of each question should promote this. Mastery of an objective that is knowledge-based can be assessed using multiple-choice or true-false questions because the learner needs to know facts or details. On the other hand, if the object is to assess how the learner will perform in a certain situation, a scenario-based assessment that requires the learner to apply the learning to a realistic situation is a better choice. This provides a challenge that causes learners to pull in the content and make decisions.

Questions have to be clear and concise—ideally, a single sentence. Learners are being assessed on what they have learned from the course, not on their reading comprehension skills. Learners should not have to decode long or circuitous questions. Prompts should be simple: who, what, where, when, why, how. And language should be plain and free of unnecessary jargon (although terminology germane to the content must be included).

For multiple-choice questions, the incorrect answer choices can be just as important as the correct choice. A topic may have nuances that the learner must recognize and choose between for the best outcome. Care must be given to wrong answers so this learning opportunity won't be missed. Very often this requires working with a subject-matter expert to ensure the quality of answer choices.

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A decision must also be made on whether the assessment will be linear or nonlinear. Some topics lend themselves to learners working their way through a series of questions, one right after another, and being scored on their answer choices. For example, assessing learners' abilities to prove algebraic theorems can be done in a linear format. However, developing a sales-based e-learning assessment may be better served with a case study question showing different customer reactions based on choices the learner makes. For this situation, a nonlinear treed format might work best. (LeGault, 2015b)

There are many instances of good assessment vehicles available online. The sample linked to here is available from SmartBuilding Consulting (http://www.smartbuilder.com/ examples/Patient_Management/player.html). As you progress through the module, note how the learning and assessment complement each other.

Offering Feedback

Well-crafted assessments provide learners the opportunity to explore correct and incorrect choices by receiving feedback about each choice. This additional context helps learners become more familiar with the content as they work through the course toward the final, graded assessment. Best practice is to use choice-level feedback addressing correct as well as incorrect choices. In addition, support options can be provided in the feedback so learners can look back at previous information or access additional sources to help them gain mastery.

Feedback can be a valuable opportunity for teaching without distracting from the main flow of a lesson. Good feedback notes the correct answer and explains why it is correct. Conversely, it notes incorrect answers and gives hints on how to find the correct information.

For instance, in the SmartBuilder course referenced above, correct answers to the scenario-based questions result in the message "Positive Feedback. You made the correct diagnosis." The feedback goes on to reiterate the correct steps the learner took. Incorrect answers receive feedback such as "Negative Feedback. This diagnosis is not supported by the signs and symptoms of the case…You should review the patient history and physical and try again." Then the patient is brought back to the appropriate screen.

Nicole LeGault, a community manager on the instructional design website articulate.com, notes these five points for effective feedback (LeGault, 2015c):

1. **Be timely.** Give feedback to your learners as soon as possible.

2. **Don't present new information.** Do not confuse the important points of the learning.

3. **Be sensitive.** Use a delicate and sensitive manner for feedback, especially for incorrect answers.

4. **Demonstrate real-life consequences.** Take advantage of the teaching moment with feedback that reinforces the important point.

5. **Be clear and concise.** Don't overload learners with text. If possible, link the information to their real-life situation.

Collecting and Using Assessment Data

E-learning assessments can provide various types of data. The data can be used by the course itself, by the instructor, and by the learner.

How Assessment Results Can Be Utilized by E-Learning Course

- Transforms a simple course flow into something more complex and dynamic. This increases learner engagement and retention.

- Evaluates the choices learners make and provides immediate remedial and custom feedback. This timely feedback keeps learners involved in their learning.

- Creates an adaptive learning path for personalized learning based on results. This allows learners to concentrate on the content that they need most.

- Tracks progress and completed modules. This can alert instructors to learners' needs (either remedial or additional) and keeps learners on track by organizing their experience and encouraging them to continue.

How Assessment Results Can be Utilized by Instructor/Learners

- Shows where individual learners are at in the course compared to where they should be.

- Finds out what resources (enrichment/review) individuals have accessed.

- Evaluates learners' engagement in course.

- Finds out what knowledge deficits individual learners have.

- Notes interests individual learners have developed (frequency of use), makes recommendations to learners on what else they need to do.

- Reports on number/percent of learners arriving at checkpoints/mastering content and skills and completing course.

- Provides opportunity for instructor and learners to evaluate efficacy of course.

Conclusion

Assessment is an essential part of any e-learning course. Far from being an afterthought, creating useful assessment is a creative process that complements the coursework. Properly constructed and integrated with the learning material, assessment provides the means for personalizing learning, offering remediation and enrichment, and updating and improving the learning experience.

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