

## Embedded Multiple Choice Tests

### A Definition of Embedded Assessment for Test Questions

Embedded assessment on multiple choice tests allows faculty to measure specific course learning outcomes by incorporating assessment items into an existing unit test, mid-term exam, or final exam. Faculty who are teaching a particular course, choose one learning outcome and design a series of questions that will directly measure the learning outcome. For example, in PSY-101, one learning outcome is “List and illustrate the types of memory including encoding, storage, and retrieval.” In order to complete an embedded assessment for a multiple choice test, a group of Psychology faculty members teaching PSY-101 will write at least 5 multiple choice questions about memory types and include the exact questions on an exam that will be offered to their PSY-101 students.

### The Purpose of Embedded Assessment

Embedded assessment allows a group of faculty members teaching a course to determine whether or not students are fulfilling the course’s learning outcomes. In many cases, this knowledge will enable a faculty member to confirm that his or her pedagogical approach is effective in giving students the opportunity to meet course learning outcomes. When data indicate that students are not meeting a course outcome, a faculty member may want to reflect on how he or she might alter pedagogical approaches to provide more opportunity for students to master the course outcome.

This type of course assessment can also be used for program assessment, if the course learning outcome can be directly tied to a program objective.

### Steps in Designing Embedded Test Questions

1. Discipline faculty members choose one course learning outcome for a particular course that they want to assess.
2. Faculty members prepare at least 5 [multiple choice questions](#) that will parse the learning outcome into meaningful components necessary to illustrate student achievement.
3. Faculty teaching the specific course administer the agreed upon questions in an agreed upon exam. The questions **MUST BE** the **SAME** for tests.

### Analyzing and Using Results

1. After the test has been administered, one person should collect all student responses for the embedded test questions, so that responses can be tallied for a summative analysis. Look for strengths and weaknesses in student learning. Which question had the largest number of correct responses? Which one had the lowest?
2. Faculty involved in the assessment will review the tallied responses and consider results in terms of improvement of student learning. This is an opportunity to share best practices with your colleagues.
3. It is important for faculty to consider not only the results from students but also the possibility that questions need to be revised in order to get at the true assessment of learning for that outcome. Scrutinize any question that more than half of the students answered incorrectly.

4. Finally, this type of assessment can be used over many semesters as a way to measure progress and change. It is imperative that faculty discuss options for improving student learning of the course outcome.