

Pre- and Post-Tests

Pre- and post-tests measure student learning received during a course or a program as a result of comparing what the student knew before the course or program and then after. This type of test offers a value-added perspective of measuring student learning in a course or a program. A value-added approach is particularly useful for developmental courses in that standards-based tests or benchmarks may not be appropriate for measuring students in these courses. Pre-and post-tests allow faculty to see if students' skills significantly improve after course learning and instruction. This method is also useful in programs that have few students so that comparisons with standards or norms may not be appropriate.

How to write a pre- and post-test

Each test question should be matched to a Course Learning Outcome or Program Objective. For example, if your course learning outcome is "Upon successful completion of this course, students will identify and make use of effective time-management skills," then questions should have students apply appropriate time management skills to various situations. The questions could be multiple choice, true/false, and/or short answer. Try to write 3-5 questions for each outcome or objective.

Guidelines for writing pre- and post-tests:

- Tests assess Course Learning Outcomes or Program Objectives
- Both tests have the SAME items in the same sequence
- Multiple choice questions have 4-5 answer options
- Avoid use of negative questions (questions using the word "not" or "except")

Analysis of pre- and post-tests

Compare pre- and post-test results for each student. Faculty should work together to determine their expectations for improvement. What percent increase is acceptable? What was expected? What would be considered exceptional? Often times this is done after the first assessment and refined with a subsequent data collection effort. When establishing performance standards it is important to set reasonable goals. Expectations should be set high enough to challenge students to do their best work.

The post-test measures learning as a result of the course or program, identifies students who may need additional help, and may highlight where faculty want to revise/improve student learning opportunities.

Analyze post-test data by reviewing each test question. Group analysis can be conducted by looking for patterns: Which question did most students get correct? Which is most often incorrectly answered? Look for patterns in the corresponding outcomes/objectives, too. Are students performing better in some areas than others? From this information, instructors may want to alter content of the course to improve identified weaknesses or use the information about student strengths as evidence of effective practices.