

ABET Accreditation Compliance Notes - Criterion 4 (Continuous Improvement)

Provided by the Accreditation Council Training Committee – Criteria Compliance Task Force, April 2020

The program must regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained. The results of these evaluations must be systematically utilized as input for the program's continuous improvement actions. Other available information may also be used to assist in the continuous improvement of the program.

The following comments regarding Criterion 4 are meant to improve compliance by addressing various misconceptions that have been observed on prior visits and in written reports:

General:

1. **What Are The Definitions?** All four ABET Commissions have agreed to use common definitions for “assessment” and “evaluation,” as assessment and evaluation are two separate processes. Assessment is one or more processes that identify, collect, and prepare data to evaluate the attainment of student outcomes. Evaluation is one or more processes for interpreting the data and evidence accumulated through assessment processes. Therefore, it is possible for a program to be compliant for one process but not the other. Descriptions of shortcomings should be clear in describing which, if any, of these processes is non-compliant.
2. **What Assessment Models Can Programs Use?** Although the methods presented at ABET Assessment workshops are “best practices” models, no official “ABET Assessment Model” or “ABET Evaluation Model” exists or is implied. Programs are free to adopt any model that proves effective for their environment and situation.
3. **Must “Best” Practices Be Used?** Note that this criterion requires the regular use of “appropriate” processes, not the “most efficient” nor the “most effective.” If the processes used result in identifying areas for improvements, then they, in all likelihood, are meeting this descriptor in the criterion.

Assessment:

4. **What's Direct Assessment?** Direct assessment refers to assessment that provides for direct observation of student performance against a measurable outcome. Examples of direct assessment include course-embedded assessment such as projects, homework, exams, performance appraisals, and oral exams. Criterion 4 refers to the “extent to which” outcomes are attained. It follows that some measures are needed to provide direct evidence that allows the program to determine the extent of attainment based on observed student performance.
5. **What's Indirect Assessment?** Not all assessment needs to be direct or quantitative. Indirect assessment refers to anecdotal evidence or self-reported ability. Having a student perspective expressed via qualitative methods is a valid assessment method that might yield valuable data and insights for particular aspects of student outcomes, particularly when an outcome depends on student opinions, attitudes, and values (e.g., inclusion); however, assessment based *only* on student perception is typically not compelling. Examples of indirect assessment include student exit surveys, focus groups, and interviews.
6. **What About Performance Indicators?** Some programs use performance indicators - specific, measurable achievements that help identify student performance required to meet the outcome. Performance indicators are descriptors that together represent attainment of the outcome in the context of the program. Results for attainment of performance indicators are a measure of student learning and may point toward areas needing improvement actions.
7. **Where Can Programs Assess?** Outcomes represent what students are able to do by the time of graduation. Programs are free to determine the number and level of courses in which assessment is performed to determine the extent to which outcomes are attained. It is not necessary to assess all outcomes in every course. Note that ABET's definition of student outcomes allows assessment to be concentrated toward the end of the curriculum. Programs should be able to identify where in the curriculum improvements should be made if an area for improvement is identified.
8. **How Often Should Programs Assess?** Programs need to sample outcomes from every student cohort in order to have an effective continuous improvement process. Although assessing every outcome every year is not required, assessment only once every six years is insufficient. For associate degree programs, assessment may need to be conducted more frequently.

9. **How Many Data Are Enough?** ABET does not prescribe how much data to collect. The amount of data and data sources should be those which are sufficient and sustainable for making informed judgments about program improvement needs. The program has the flexibility to sustainably collect the data considered necessary for making informed decisions. It is acceptable for a program to promote sustainable assessment practices through such means as data sampling within groups, data collecting via learning management systems or other web-based tools, and cyclically working with only a subset of outcomes. When sampling within groups, the samples should be chosen to be demographically representative of the students in the program. Sampling methods or procedures need to be described.
10. **What Are Acceptable Data Benchmarks?** Some programs select artificially low performance standards (thresholds or benchmarks) that ensure that all student cohorts demonstrate sufficient attainment of all outcomes; in other cases, some programs select just those assessments where the standard is easily attained. In both cases, the data being collected may not be meaningful. Make sure that what is being measured is meaningful and not just a mechanistic way to appear to satisfy the criterion.
11. **What If The Degree Of Attainment Is Not Numeric?** Nothing in the criterion or definitions requires that assessment results be numeric. For example, a rubric that measures the level of attainment with descriptors ranging from “needs improvement” to “exceeds expectations” can be an appropriate assessment instrument.
12. **Are Team-Based Assessments OK?** Yes, team assessments can be used effectively. It is common to see Capstone Design reports used for assessing design- and communication-based outcomes; it is not necessary that every student write a separate design report. Also, problem-based learning often occurs in a team setting. Assessment techniques exist that are quite effective at revealing student learning in such settings. The program should have a means for determining that each student actually participated in the work leading to the team result.

Evaluation:

13. **Why Can Averages Be Ineffective?** Averaging can hide diagnostic results of strengths and weaknesses in student learning, since evidence of low performance by one group can be masked by the high performance of another group. Accordingly, assessment results should not be averaged to give a single overall “score” for the attainment of an outcome; this applies both to averaging results from multiple performance indicators within a single outcome, and to averaging results from an outcome assessed at different class levels (formative vs. summative). Programs may use various methods to incorporate different assessment data sets to determine the overall attainment of an outcome without averaging.
14. **What If An Evaluation Result Is Not A Number?** Neither the criterion nor the definitions require evaluation results to be numeric. A qualitative process can be just as effective as a quantitative process if it leads to judgments about the need for program improvements and where in the curriculum they should be applied.

Continuous Improvement Actions:

15. **What Is The Purpose Of This Criterion?** The purpose of Criterion 4 is to promote evidence-based program improvements. Assessment and evaluation are tools that the faculty can use which provide evidence for the need for improvement and guidance for appropriate program-improvement actions.
16. **Are The Decisions Being Informed (Based On Evidence)?** Note that Criterion 4 requires that the results of the program’s evaluation process, which in turn, is based on the program’s assessment processes, be systematically utilized by the faculty as input for the program’s continuous improvement actions. Accordingly, programs need to show the connection as to how their evaluation results informed the decisions made regarding program improvements.
17. **Are The Evaluation Inputs Being Used?** Programs must consider opportunities to effect improvements based on a set of inputs that include the results of the evaluation of assessment data. If the inputs to the continuous improvement process indicate a need for improvement, justification for not taking action should be appropriately documented. Possible reasons for not taking immediate action could include identified anomalies, prioritizing other areas for focus, budgetary and resource constraints, or natural disasters.
18. **Can Other Inputs Be Used?** Criterion 4 explicitly allows additional information to be used as inputs into a program’s continuous improvement process. However, the only inputs that are required by the criterion are the evaluation results; programs should not be penalized if they limit their continuous improvement process to just the required inputs.