**Data Collection Tips**

Best practices recommend defining four to six student learning outcomes (SLOs) for academic programs and no more than three SLOs for certificate programs. Each SLO should have both a direct and indirect measure of student learning. Data collection should be a collaborative and inclusive process that provides useful information for both the individual faculty member and the academic program. If possible, use or modify existing assessment practices so that the data collection process is feasible and accessible for all faculty members.

**Direct Methods**

Direct methods require students to demonstrate their learning so that observers can assess how well their work fits into the overall program expectation. Observers can then assess and evaluate the student work based on the program SLOs. Direct methods can include but are not limited to:

- student performances
- research projects
- conference presentations
- capstone projects
- final portfolios
- observations
- pre/post-tests
- papers
- exams
- embedded assignments

**Indirect Methods**

Indirect methods capture the attitudes, perceptions, or opinions of students’ learning and the efficacy of the factors that foster that learning. Indirect methods alone provide an inadequate picture of student learning, and therefore ought to be complemented with direct methods. They can, however, expand the discussion among faculty to evaluate the teaching and learning process. Indirect methods can include but are not limited to:

- individual student interviews
- alumni surveys
- student surveys
- interviews
- focus group interviews
- job placement data
- employer surveys
- enrollment in higher degree programs

**The Benefits of a Multiple Methods Approach**

Best practices recommend a multiple methods approach to academic program level assessment since a single method can restrict the interpretation of student learning. However, the limitations of one method may prompt the selection of other methods. Altogether, multiple methods provide a more accurate frame for assessing student learning. More so, a combination of quantitative and qualitative assessment methods adds reliability and a more comprehensive approach to assessment. Using a multiple methods approach to academic program level assessment has several advantages:

- Minimizes potential limitations of data collection and analysis inherent in a single method
- Provides alternative methods for students to demonstrate learning outcomes that may not have been possible in other methods
- Provides a more complete understanding and interpretation of student achievement
- Values the diversity of different learning methods
