

Assessment Handbook

CONCORD UNIVERSITY
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Chapter 1 - Assessment Basics

What is assessment?

Purposes of assessment

Elements of Assessment

Components of effective assessment

Levels of assessment

General Education Assessment

Program-level Assessment

Assessment is an ongoing process aimed at understanding and improving how effective an institution is in achieving its goals. An effective assessment program should lead to quality improvement and achieving institutional, programmatic, and course goals and objectives. Concord University's commitment to assessment is grounded in its mission to provide accessible, affordable, high-quality, and student-centered teaching and learning opportunities strengthened by integrated support services and co-curricular programs.

What is assessment?

Although assessment generally refers to the evaluation of student learning, it can also be used to refer to the evaluation of institutional effectiveness. Whereas faculty members assess what their students know and are able to do within a course or academic program, a Registrar's Office might assess the effectiveness of the registration process.

Assessment is a process. For continuous improvement to occur, major processes should be assessed after delivery. Then, assessment findings are evaluated and recommendations for improvement are fed into subsequent planning.

Assessment of student learning is a systematic attempt to

- Understand what students are/aren't learning
- Provide feedback to reinforce student learning
- Investigate and improve teaching strategies
- Improve student learning

Assessment of institutional effectiveness is

- The process of setting goals, measuring performance, and using data in a cycle of planning and evaluation
- Measuring an institution's ability to meet its stated goals and outcomes

Assessment is not

- Solely an administrative activity
- A means of punishment. It is for improvement only!

- An intrusion into a faculty member’s classroom or an infringement on academic freedom.

Purpose of assessment

Although there are various purposes for assessment, a central function is to improve student learning, which is important for all educational institutions. In addition, assessment efforts are typically mandated by accreditation criteria, governing bodies, and college administration due to an increased need for accountability of educational institutions. As a consequence, a culture of assessment is rapidly growing on college campuses as institutions reap its benefits.

CU’s mission statement: Assessment should relate to the Institution’s mission, goals, and objectives. Student learning is the central issue posited in Concord University’s mission statement; consequently, assessment efforts at CU stem directly from its mission:

“The mission of Concord University is to improve the lives of our students and communities, through innovative teaching and learning, intellectual and creative activities, and community service and civic engagement.”

Accountability: Institutions of higher education are under increasing scrutiny from governing bodies and stakeholders to provide evidence of effectiveness. Assessment is the best means of providing such information.

Accreditation: Assessment of student learning and institutional effectiveness is also a key component to all accreditation criteria. The undersigned national higher education associations and regional accrediting commissions have endorsed the attached statement, “Principles for Effective Assessment of Student Achievement.”

The statement grew out of a meeting of the presidents of the seven regional accrediting commissions and public and private university provosts. The statement is intended to emphasize the need to assess effectively student achievement, and the importance of conducting such assessments in ways that are congruent with the institution’s mission.

All institutions should be expected to provide evidence of success in three domains:

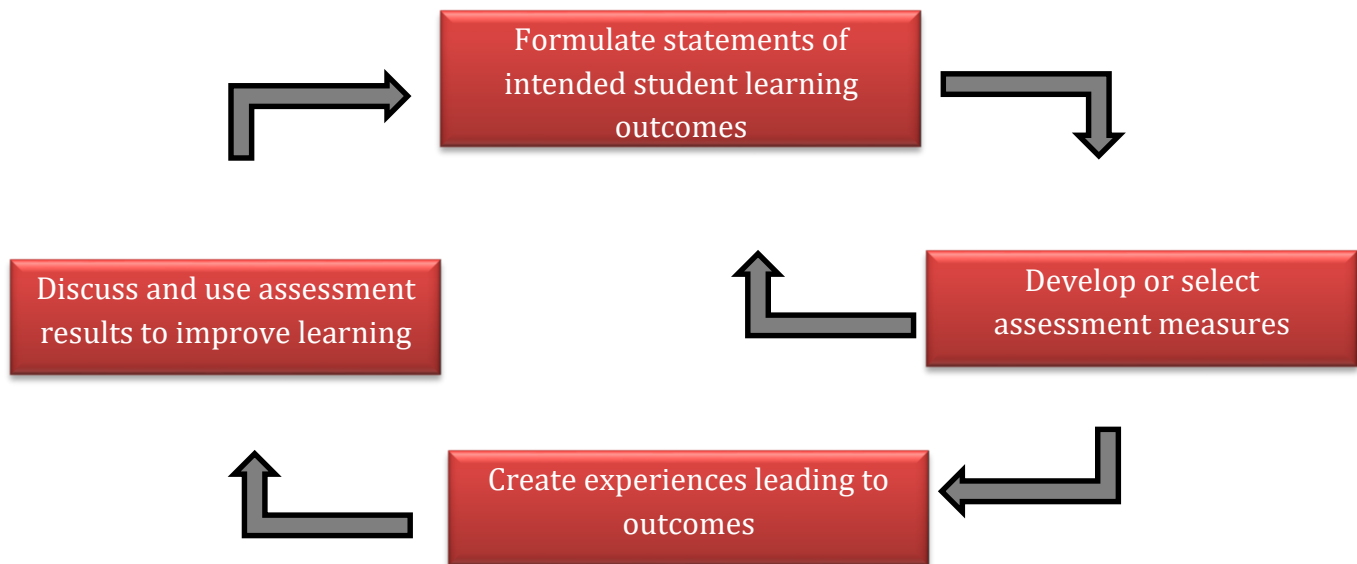
1. *Evidence of the student learning experience:* Institutions should be able to define and evaluate *how* their students are learning: more specifically, institutions should be able to describe the kinds of experiences that they expect students to have inside and outside the classroom.
2. *Evaluation of student academic performance:* Institutions should be able to define meaningful curricular goals, and they must have defensible standards for evaluating whether students are achieving those goals.
3. *Post-graduation outcomes:* Institutions should be able to articulate how they prepare students consistently with their mission for successful careers,

meaningful lives, and, where appropriate, further education. They should collect and provide data about whether they are meeting these goals.

Decision making: Assessment results can be used to improve decision – making processes. For example, a program could use its assessment data to support requests for budget increases, curricular changes, changes in procedures, etc.

Institutional Improvement: Simply put, the purpose of assessment is improvement: improvement of student, academic programs, and University processes.

Elements of assessment



Components of effective assessment

First and foremost, a successful assessment program requires dedication from a University's faculty, staff, and administration and a commitment to student learning; however, commitment and dedication must also be tempered by proper planning. Although volumes of books and scores of conference presentations have centered on the making of an effective assessment program, there are a few key points they generally have in common.

- Assessment efforts must stem from the University mission statement and be driven by goals and objectives
- Assessment must be founded on a plan that is continuously evaluated and revised
- Assessment must be faculty driven (or unit-driven when assessing institutional effectiveness) and be sustained by administrative commitment
- Assessment results must be used to document outcomes, make improvements in teaching and curriculum, and assist with planning/budgeting decisions.

Levels of assessment

Assessment of student learning occurs within three levels: **course, program, and institution.**

1. Institutional-level assessment involves assessing students across an institution on common learning objectives. For instance, the academic profile is used by CU to assess students across all programs on General Education learning goals, such as knowledge, critical thinking, communication, and personal, civic, cultural and global competence
2. Program-level assessment involves assessing student learning within a department or unit. For examples, certification tests can be used to gauge student learning/readiness upon program completion.
3. Course-level assessment involves assessing student learning within a single course (usually across multiple sections).

General Education Assessment

The general education program is appropriate to the mission, educational offerings, and degree levels of the institution. The institution articulates the purposes, content, and intended learning outcomes of its undergraduate general education requirements. The program of general education is grounded in a philosophy/framework developed by the institution. It imparts broad knowledge and intellectual concepts to students and develops skills and attitudes that the institution believes every college-educated person should possess. – **HLC Criteria 3.B.2**

General Education courses are mapped to the University's learning goals and outcomes in order to document student learning in the General Education program. Using a common assessment rubric, data is collected from all General Education courses at the end of each semester. The University uses Qualtrics to collect the data from the General Education courses offered each semester. At the end of the data collection period, the collected data is rolled into Banner so that it can be aggregated and disaggregated to inform programs.

Throughout the assessment process, faculty and academic administrators are instrumental in collecting and analyzing data from the General Education program and individual programs in order to make informed decisions and changes. Data from Qualtrics is distributed to department chairs, deans, provost, and available on the University Assessment webpage. Academic departments are encouraged to analyze, evaluate, and make continuous improvement for student learning

Program-level Assessment

One important step in the development of an institutional assessment plan is the establishment of program-level assessment plans. Program – level assessment focuses attention on the program, as a whole. Assessments probably are more likely to identify needs to improve connection between courses, and attention can focus on broader program – level outcomes.

Student affairs professionals may be more likely to participate in the process, and multi – disciplinary conversations about assessment results are more likely to occur.

Effective program assessment provides answers to three questions:

1. What is the program trying to accomplish?
2. How well is the program accomplishing its intended outcomes?
3. How can the program improve?

Chapter 2 – Getting started

Developing an assessment plan

Constructing goals and objectives

Guide to develop intended student learning outcomes

Planning is the first step toward the development of a successful assessment program. Assessment efforts must be driven by stated goals and objectives in order to understand how assessment efforts coincide with Concord University’s mission, to know what is being measured, and to determine whether findings are acceptable. The assessment plan serves as a road map to guide a college’s assessment endeavors.

Developing an assessment plan

Developing an assessment plan should save more time than it takes to create. It helps you and your colleagues stay focused and avoid costly mistakes, and it should lead to more effective assessment. The major elements of an assessment plan describe:

- How each outcome will be assessed?
- Who will collect and analyze the data?
- Where and how data will be collected?
- When and how often each outcome will be assessed?

- Who will reflect on the results and close the loop, when needed, by implementing appropriate changes?
- How results and implications will be documented?

Although the development of an assessment plan isn't quite this easy, here are five quick steps toward developing an assessment plan.

1. Establish goals tied to university mission and purposes.
2. Create specific objectives to measure each goal.
3. Select assessment tools (multiple methods) for each objective.
4. Collect and analyze the data to evaluate whether objectives and performance criteria were met.
5. Use the findings to facilitate continuous improvement, assist with decision making, provide a basis for evaluation, and make recommendations for improvement(s).

As the plan develops, keep asking yourself:

- Is the plan *meaningful*?
- Is the plan *manageable*?
- Is the plan *sustainable*?

Constructing goals and objectives

Successful assessment begins with a clear sense of what the program/unit intends to accomplish. To begin, program goals and objectives must be defined. Once these are identified, assessment can begin to determine how well these goals and objectives are being met. Keep in mind, different disciplines use different terminology to label goals and objectives. The concept, not the label, is what is most important.

Goals are broad, long-range statements about the general purpose of instruction or a department. Goals are primarily used in policy making and general planning. Typically, three to five goals per program are acceptable. Both academic and non-academic programs should refer to the student learning goals of Concord University when establishing program area goals.

Consider these steps to assist with creating goals:

- What should students know and be able to do upon completion (of course, program, etc.)?

- Describe the ideal student or graduate in your program (or the ideal process).
- Describe the ideal process (registration, accounting, student services, etc.)
- Review how the program is described in existing college statements (catalog, brochures, accreditation reports, course syllabus, etc.)
- For what do you want your department to be known on campus?

Examples of goals

- ❖ Student learning goal: student will master skills required to function as a professional in their field of study
- ❖ Student learning goal: students will demonstrate an understanding of the important concepts and methods in the sciences.
- ❖ Institutional effectiveness goal: student enrollment will increase
- ❖ Institutional effectiveness goal: the campus technology system will be expanded.

Objectives are brief, clear statements that describe desired outcomes in relation to broader goals. Objectives specify what is expected and describe what should be assessed. Keep in mind that objectives state your desired outcomes. If these desired outcomes are not met, be prepared to follow-up with an improvement plan or recommendations for change.

Before writing objectives, ask yourself for each goal, what are the specific behaviors skills or abilities that would identify if the goal is being achieved?

Objectives should:

- Use simple terminology to describe intended outcomes.
- Be realistic and achievable
- Use action verbs to describe definite, observable actions
- Include the actions and behaviors being assessed
- Include a description of the conditions in which the action takes place
- Include the criteria for assessment (what is the expected level of performance?)
- Describe the target group (who is being assessed?)

Examples of objectives:

- ❖ Student learning objectives: students' pass rate on the Academic Profile Assessment test will meet or exceed the national norm for each sub – test

- ❖ Student learning objective: students' mean scores will be at least a 3.0 on a 4-point scale on the final project in their capstone course, as assessed by the departmental rubric
- ❖ Institutional effectiveness objective: the official duplicated yearly head count of credit students will increase by at least 20% over the previous year.
- ❖ Institutional effectiveness objective: 100% of all deadlines for HB2224 will be met.

Guide to develop intended student learning outcomes

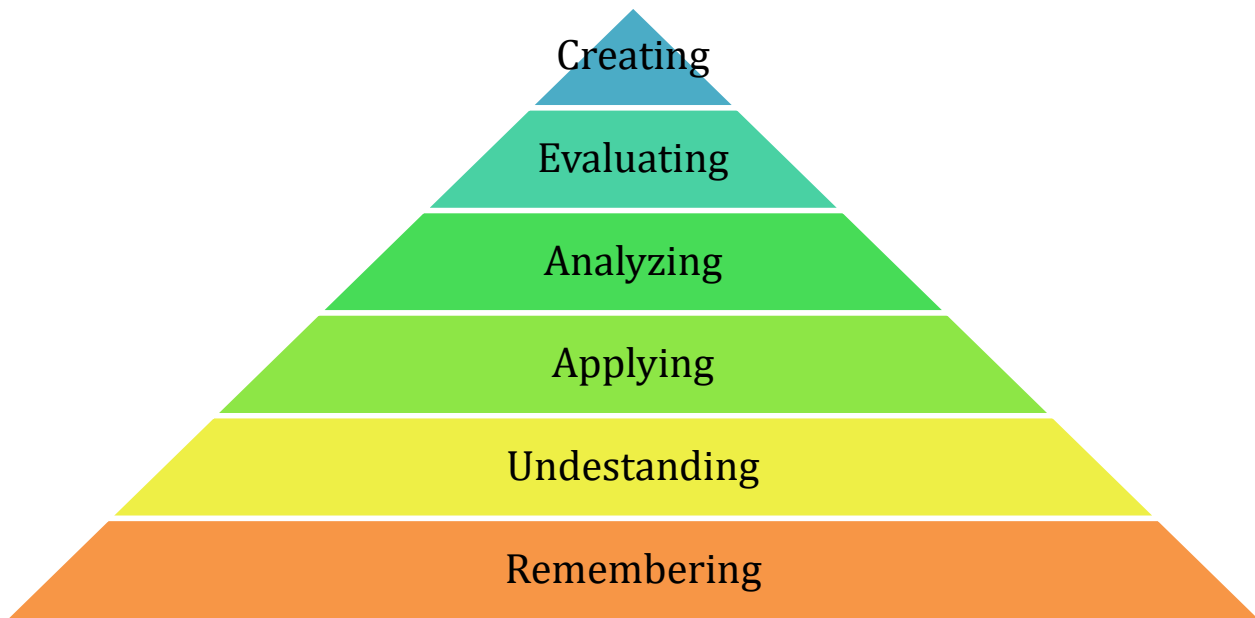
Characteristics of intended student learning outcomes

Student learning outcomes:

1. Express what students will be able to know or do
2. Focus on the product rather than the process
3. Are measurable (i.e., identifiable or observable)
4. Are detailed and specific (whereas goals are broad and general)
5. Include action verbs

What are action verbs faculty can use to develop intended student learning outcomes?

Bloom's 1956 cognitive taxonomy was updated by Lorin Anderson and David Krathwohl in 2001. The revision came from the "need to refocus educators' attention on ... the design and implementation of accountability programs, standards based curriculums, and authentic assessments" (Anderson and Krathwohl, 2001, pxxi-xxii). The pyramid and table below outline the hierarchical nature of the cognitive taxonomy.



Levels of Knowledge	Action Verbs
Remembering: Can the student recall or remember the information?	Define, duplicate, list, memorize, recall, repeat, reproduce, state
Understanding: Can the student explain ideas or concepts?	Classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, paraphrase
Applying: Can the student use the information in a new way?	Choose, demonstrate, dramatize, employ, illustrate, interpret, operate, schedule, sketch, solve, use, write
Analyzing: Can the student distinguish between the different parts?	Appraise, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test
Evaluating: Can the student justify a stand or decision?	Appraise, argue, defend, judge, select, support, value, evaluate
Creating: Can the student create new product or point of view?	Assemble, construct, create, design, develop, formulate, write

Chapter 3 - Assessment tools

What is being assessed?

Assessment tools

Strengths and weaknesses for common tools

Guidelines and tips

Using formative and summative tools

Using direct and indirect tools

Creating rubrics for assessing student work

Once goals and objectives have been established, the next step is to identify appropriate assessment tools to measure the stated objectives. Various assessment tools are available and the strengths and weaknesses of each should be weighed in relation to the needs of the department. Upon selection, these tools should be described, along with any pertinent rationale, in the assessment plan.

What is being assessed?

- Student learning (knowledge of the discipline, skills, and values)
- Student attitudes and perceptions (topics: advising and registration, campus facilities, course scheduling, curriculum, support services, campus climate, teaching, student activities, preparation for work or graduate school, etc.)
- Program processes and services (Are students being supported efficiently and effectively?)

Assessment tools

Among many options of assessment techniques available, you want to select techniques those that:

- Are valid
- Are reliable
- Generate actionable results
- Are efficient in the use of time and money
- Engage respondents and those who should act on results

Data source	Assessment tool examples	Who/what is analyzed?	What will the data tell you?
Self-report	Surveys Interviews Focus groups Reflective essays	Students (entering, enrolled, and graduating) Alumni Employers Faculty Staff Parents	Perceptions on: Campus climate Perceived learning College services Attitudes Values

Achievement/ knowledge test	Embedded exam questions Instructor designed tests Pre- and post-tests Standardized tests Certification exams	Students (Program-level assessment typically assesses students near program completion and either compares them to an established standard or to entering students)	Mastery and knowledge of principles and skills
Student academic work	Capstone course products Portfolios Presentations Papers and reports Course assignments Skills assessments	Students (Program-level assessment typically assesses students near program completion and compares them to an established standard and/or to entering students)	Mastery and knowledge of principles and skills
Campus data	Enrollment data Graduation data Grade distributions Student use data	Administrative units Programs Student services Student transcripts	Trends Accuracy Efficiency processes

Strengths and weaknesses for common tools

Self-reports

Assessment Tools	Definition	Strength	Weakness
Surveys	A series of questions used to obtain feedback from target group	Quick to administer and can provide immediate feedback	Difficult to create effective survey and to obtain honest, helpful responses
Focus Groups	Orchestrated discussions with target groups to obtain feedback	Provides a wealth of information	May be difficult to analyze information obtained, time consuming, logistics of students, and may be difficult to obtain honest answers

Achievement/Knowledge test:

Assessment Tools	Strength	Weakness
Embedded questions on exams	Students are motivated to perform because items are graded	Locally – developed tests are not always considered “valid”
Instructor – designed exams/tests	Items can be created to match assessment needs and can be implemented departmentally across different sections and instructors	Locally – developed tests are not always considered “valid”
Pre- and Post- tests	Can provide a measure of progress or growth in student learning across a semester or a program	Similarity of questions is needed for comparison purposes, danger of “teaching to the test”, and test / re-test issues
Standardized or certification exams	Provides normative data for comparisons and provides a beneficial benchmark for students	May or may not fit with learning objectives

Student Academic Work

Assessment Tools	Definition	Strength	Weakness
Capstone course products	A culminating product of student work	Excellent source for program – level assessment data	May result in small sample sizes
Portfolios	Collections of student work, usually rated with a rubric	Assessing several samples of work provides more valid data than assessing performance at one point in time	Obtaining objective evaluations of work (creating rubric and training raters)
Course assignments	Oral presentations, papers, lab assignments that would be rated with a rubric	Existing assignments make assessment easier and more pertinent	Obtaining objective evaluations of work

Campus data:

Assessment Tools	Definition	Strength	Weakness
Archival data	Pre-existing or post-hoc data, such as grades in previous or subsequent courses, retention and enrollment data, graduation statistics	Can provide a wealth of background data	May or may not be a direct measure

Guidelines and Tips

Here are a few friendly suggestions for developing a meaningful, manageable, sustainable, and productive general education assessment program.

1. **Don't skip steps:** Remember the five steps in Chapter 1? Take the time to develop education learning outcomes, to examine institutional alignment with the outcomes, and to develop a reasonable plan that will frame a sequence of assessment studies with the potential to improve student learning
2. **Don't try too much at once:** Develop a multiyear assessment plan that allows you to do a series of well-conceived assessment studies. If you try too much at once, the assessment is likely to be trivialized or you will exhaust yourself and your colleagues, eventually leading to the abandonment of the effort
3. **Maintain quality controls**
4. **Pilot - test procedures:** Be sure the assessment studies will result in actionable, valid, reliable findings before investing a great deal of time in them.
5. **Close the loop:** Just collecting data is not assessment. Reflect on results, determine implications, identify and obtain needed support, and implement needed changes.
6. **Take samples:** Having a representative sample is more important than having a huge sample.
7. **Be professional:** Effective assessment requires collaboration, respect, and collegiality among campus professionals.
8. **Focus on what is important**
9. **Embed assessment:** Avoid excessive, additional demands on student and faculty time and obtain data that are likely to show the extent of student mastery of learning outcomes.

Using formative and summative tools

- **Formative assessment** is “ongoing assessment that provides information, about progress, misunderstanding, need for clarification, and so forth” (Driscoll and Wood, 2007, p. 86) regarding student learning.
- **Summative assessment** is “conducted after a program has been in operation for a while, or at its conclusion, to make judgments about its quality or worth compared to previously defined standards for performance” (Palomba & Banta, 1999, p. 7-8).

Using direct and indirect tools

- **Direct tools** refer to objective measures of knowledge or ability, such as students’ scores on a national standardized exam, student performance on a final paper, or the number of applicant inquiries received after a recruiting visit.
- **Indirect tools** refer to subjective measures of attitude, perception, or belief such as a questionnaire to assess students’ perceptions of their knowledge or a survey of the effectiveness of a recruiting visit.

Both direct and indirect assessment tools are invaluable for assessing either student learning or institutional effectiveness. For example, when assessing student support services, it is important to have direct measures of the number of students served and the outcome of these services, but it is equally valuable to gather indirect data to obtain students’ evaluation of the services received.

It is important to have a balance of both direct and indirect tools in your assessment plan. An assessment plan without indirect tools does not provide data on the opinions and perceptions of its clients/students. Similarly, an assessment plan without appropriate direct tools does not provide data on actual processes or student learning.

Tips for academic program – level assessment tools

Program–level assessment should provide data on the culmination of student learning within academic programs. Assessment measures can be used to compare entering students with advanced students in order to examine learning over time. Or, assessment measures can be used to examine the level of knowledge and skills attained by program graduates by assessing advanced students in comparison to a stated level of competence.

Tips for academic course – level assessment tools

Course-level assessment should provide the instructors with information on student learning within an individual course to assist with academic planning, curriculum issues, and teaching revisions. Assessment can either be performed within a single instructor's classroom or applied across all sections and all instructors for a particular course. The latter method improves validity of the data and can often increase the consistency of teaching across multiple sections.

The syllabus is an important resource for course-level assessment. Instructors should begin by reviewing the course goals stated on the syllabus to choose appropriate assessment tools. One popular tool for course-level assessment is the pre-/post-test. This method involves creating a test that assesses the most important course goals and administering this test on the first and last day of the semester. This method provides a measure of knowledge gain and can be used in combination with an item analysis to determine students' strong and weak areas. Instructors might also consider using a final paper, project, or presentation to assess student learning in a course. In such cases, a rubric can be used to assess the student academic work.

Creating rubrics for assessing student work

Rubrics are an effective way to assess students' ability on qualitative measures, such as portfolios, papers, oral presentations, etc. A rubric is simply a set of scoring guidelines used to evaluate student work. It consists of a set of categories to outline levels of competence (such as excellent, good, fair, poor). These categories are used to evaluate the important components of the work being assessed. For example, an oral presentation might be assessed on the student's organization, delivery style, and content of the speech.

Why are rubrics effective?

- Make grading more consistent and fair
- Set standards for student work
- Clarify expectations
- Help students to evaluate their own work
- Form the basis for assessment

Constructing a rubric

1. Determine what components or essential traits will be used to evaluate student work (I.e. On what do you base your grades?)

2. Determine on how many levels of competence (criterion) to measure

Four levels are the most commonly used and are easier to distinguish when rating

1. *Exemplary, Proficient, Marginal, Unacceptable*
2. *Advanced, Proficient, Novice, Beginner*
3. *Strong, Acceptable, Weak, Not Acceptable*
4. *Advanced, Mastery, Aware, Unaware*
5. *Excellent, Good, Fair, Poor*

For each level of competence, provide a clear description of expected performance

- Use objective descriptions, not value statements
- Include both qualitative and quantitative differences

Example of rubric sites

Rubric for Abstracts				
Criteria	Exemplary	Proficient	Marginal	Unacceptable
APA Reference (Maximum 10 points)	All identifying information in APA style; complete and without errors. (9-10 points)	Identifying information is provided with few errors. (7-8 points)	Identifying information has five or more errors. (5-6 points)	Identifying information has many errors. (0-4 points)
Purpose (Maximum 10 points)	Purpose is stated correctly; appropriate APA citation with quotes, author's last name, and page number plus page numbers given. (9-10 pts)	Purpose is stated but with page number missing. (7-8 points)	Purpose is stated but without appropriate APA citation. (5-6 points)	Purpose is stated incompletely. No citation is given. (0-4 points)
Key Words (Maximum 10 points)	Listing comprehensive for all words needed to comprehend the article.	Adequate listing of words needed to comprehend the article. (7-8 points)	A few words listed, technical language not addressed. (5-6 points)	Inadequate listing of key words needed to understand the article. (0-4 points)

Key Statements/ Sentence Summary (Maximum 10 points)	Sentence summary is comprehensive, thorough and accurate and without errors. (9-10 points)	Sentence summary is thorough but with a few errors. (7-8 points)	Sentence summary is less thorough and with several errors. (5-6 points)	Sentence summary is incomplete and numerous errors. (0-4 points)
Evaluation (Maximum 60 points)	Evaluation thoughtful and error free interpretation of the article or chapter and its contribution to the student's knowledge was given. Recommended readers are also listed as persons who might benefit from the work. (55-60 points)	Good coverage of content's value to student learning and a statement of possible readers are given. (50-54 points)	Minimal attention is given to student learning from article. (49-45 points)	No attention is given to evaluation. (<44 points)

Chapter 4 – Implementation

Collecting data

Analyzing data

Closing the feedback loop

How to use assessment data

Program Improvement Plan

The final step occurs in three parts:

1. Collecting the necessary data
2. Analyzing the results to determine if objectives were met
3. Using the results to make decisions and changes in order to improve student learning and/or institutional effectiveness

Data analyses do not need to be overly complicated. Their purpose is to provide useful information on whether or not objectives were met. Data can be misleading, so be sure to discuss data in relation to goals and objectives. For instance, capstone courses are commonly used to identify strengths and weaknesses in student learning across the entirety of the program. These data should not be used to evaluate the performance of the capstone course instructor.

Collecting data

Data for institutional effectiveness: Data collection for institutional effectiveness purposes tends to be straightforward and simple. The stated goals/objectives should outline the necessary data to be collected. For example, student services might have an objective to increase the number of students who receive tutoring services by 5% over the previous year. Consequently, the necessary data would be the number of students who received tutoring during the previous and current years in order to determine the percentage change. Reviewing your objectives with data collection in mind can help determine if they are adequately specific and measurable.

Data for academic assessment: Data collection for academic assessment is more complex and often depends on the assessment tool being used. Use the following chart as a reference for data collection based upon common academic assessment tools. The lists provided do not include all possible forms of data collection, but are starting point for commonly used methods.

Assessment tools	Data collection and statistics
Standardized tests	<ul style="list-style-type: none"> • Number of students • Overall mean score and range • Sub – test mean scores and range (if available) • Comparative data (national or regional means)
Pre - / Post – Tests	<ul style="list-style-type: none"> • Number of students (only students who took both tests) • Mean score for pre- and post – test and range • Mean change score • Item analysis comparison
Instructor – Designed Exam Questions (Embedded, etc.)	<ul style="list-style-type: none"> • Number of students • Overall mean score and range • Item analysis comparison
Student Academic Work	<ul style="list-style-type: none"> • Number of students • Overall mean rubric score and range • Mean rubric score and range for each component

(capstone project, portfolio, papers, presentations, etc.)	
Survey/Questionnaire (with multiple choice items)	<ul style="list-style-type: none"> • Number of students • Number/percent of students responding to each item (for each question)
Survey/ Questionnaire (with a Likert scale)	<ul style="list-style-type: none"> • Number of students • Mean score for each question • Overall mean score and range (if applicable) • Mean score and range for sub – sections (if applicable)
Survey/Questionnaire (with sure answers)	<ul style="list-style-type: none"> • Number of students • Either a listing of all comments or a narrative summary of qualitative data

Data definitions and examples

Term	Definition and Examples
Mean score	The average of all scores in a given set and is calculated by dividing the sum of all scores by the number of scores. Mean scores are generally accompanied by the range.
Range	The difference between the highest and the lowest scores in a given set and is a measure of variability. For example, if the highest score on a given exam was 100, and the lowest score was 60, the range would be 40.
Sub – tests	To break one exam into smaller sections based on common learning goals. For example, a nursing exam might yield one overall score as well as sub – test scores on patient management, pharmacology, and ethical decision making.
Comparative data	To allow comparisons with national or regional norms

Mean change scores	<p>To compare pre-test scores with post-test scores to show gains or losses.</p> <p>Two methods can be used: calculating the difference between the two mean scores or the percent change.</p> <p>For example, if the mean pre-test = 50 and mean post-test = 85, the students improved by an average of 35 points on the post-test. The percent change would indicate that student had a 70% increase on the post-test.</p>
Item analyses	<p>To present the mean scores (and any other needed statistics) for each question in addition to looking at the overall score. This procedure provides more depth to your data and allows the examination of high and low scoring areas.</p>
Rubrics	<p>To provide two main sets of scores.</p> <p>First, a mean overall score can be calculated to examine performance across all components.</p> <p>Second, mean scores for each component can be examined to add depth to your data to examine strengths and weaknesses.</p> <p>For example, a rubric on writing might provide component scores on content, structure, and grammar.</p>
Likert scales	<p>To be used in surveys and questionnaires to elicit ratings from the respondent. The scale might ask the respondent to rate their agreement to a series of statements. Mean scores can be calculated from Likert scales, which is one of the benefits of its use,</p> <p>For example, students might be asked to rate their knowledge (excellent = 4, good = 3, fair = 2, poor = 1) of course objectives.</p>

More advanced data procedures: Once you've mastered the previous types of data collection and basic statistics, you might be interested in going further with your data. If so, here are some slightly more advanced methods to consider:

- Compare data across semesters: collect data using the same measures over time to compare scores from year to year.
- Calculate standard deviations for your mean scores. Although they are generally not necessary for academic assessment, they provide a more accurate measure of the variability of scores in comparison to the range).

- Compare scores obtained from different course sections (or compare day / evening sections or full – time / adjunct instructors).
- Correlate assessment data with students’ overall course grades.
- Compare assessment data to students’ placement scores.
- Compare assessment data to students’ prior coursework.

Analyzing data

Collecting data is the first step, but analyzing data is just as important. Once mean scores have been calculated and other types of data are presented, the data must be examined for meaning. More specifically, were your stated goals and objectives met? Did your assessment results meet your expectations?

How is assessment data analyzed?

Analyzing data includes determining how to organize, synthesize, interrelate, compare, and present the assessment results. These decisions are guided by what assessment questions are asked, the types of data that are available, as well as the needs and wants of the audience/stakeholders. Since information may be able to be interpreted in various ways, it may be insightful to involve others in reviewing the results. Discussing the data in groups will result in greater understanding often through different perspectives.

Things to consider when analyzing student learning data:

- What does the data indicate about students’ mastery of subject matter or skills?
- What does the data indicate about students’ ability after program completion (graduate school or employment)?
- Are there specific areas where student performance is outstanding? Weak?
- Are there indications that point to weaknesses in general education skills (research, critical thinking, writing, etc.)?
- Do you see specific areas where you would like or expect to see higher performance levels?
- What was the most valuable thing learned from the assessment results?
- Was the assessment tool sufficient, or does it need to be revised?

Example of analyzing data

Example of Methods of Analyzing Assessment Data
Question: How did Michael do on the assessment if he earned 65 points?

Answer: To know if Michael did well on the assessment, his 65 points needs to be COMPARED against something else:			
EXAMPLE	Question answered by assessment	Data Analysis Method(s)	Challenge
55 is passing and 70 is a perfect score	Are students meeting my standards?	Standards-based; Competency based; Criterion referenced	Establishing sound performance standards
The class average is 75 points	How do students compare to peers?	Benchmarking; peer-referenced; norm-referenced	Identifying appropriate peers & collecting information from them
System average is 75 but average at the University is 85	How do students compare to the best of their peers?	Best practices perspective; “best in class”	Commitment to improving teaching & learning; Identifying best practice peers
Michael scored 35 a year ago	Are students improving?	Value-added perspective, growth, change, improvement, pre-post	Imprecise assessments hide growth, motivating students on pre-test; is growth due to “us”
Class average is 75 now and 40 three years ago	Is the teaching & curriculum improving?	Longitudinal perspective	Using the same assessment
Michael is tone-deaf	Are students doing as well as they can?	Capability perspective	Determining potential

The example was provided by Linda Suskie, Middle States Commission on Higher Education, June 2005 presentation titled, “Making Student Learning Assessment Work: Creating a Culture of Assessment & Putting Results to Good Use”

Closing the “Loop”

Remember, one purpose of assessment is continuous improvement. So, data should be analyzed with this in mind. In order for assessment to be meaningful, its data must be used to improve processes.

What does it mean to “close the loop?”

“Closing the Loop” simply means using assessment results for program change and improvement.

Things to think about

- How could teaching, curriculum, and/or processes be changed to improve outcomes?
- How could this information be used to help students improve their own learning by providing feedback?
- Who else would benefit from or use this information (other faculty, students, administrative officers, etc.)?

How can assessment results be used?

While the assessment results should be utilized mostly by the program for improvement purposes, there are additional primary and secondary uses for the findings. See chart below.

Primary Uses
Accreditation requirements Institution’s requirements HLC requirements General education review & improvement Students learning outcomes review & revision Planning & budgeting Curriculum review & revision: Delete course(s) Add course(s) Revise course content Revise and/or enhance pre-requisite or revise course sequence Modifying instructional strategies Other
Secondary Uses

<p style="text-align: center;"> Program promotion/marketing Press releases Publications Recruitment/retention initiatives Conference presentations Student development opportunities Professional development opportunities Grant applications Advising improvements Other </p>
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How to use assessment data

Improve processes: make recommendations for ways to improve processes within the program. Faculty may consider trying new teaching strategies, revising curriculum, or increasing student support.

Make informed decisions: use the findings to support planning and budgetary decisions or to supplement existing program review processes.

Share the good news: communicate findings with other campus programs or stakeholders.

Plan for next year: use the findings to create goals and objectives for the upcoming year.

Improve future assessment: consider ways to improve the assessment process (reflect upon the tools, target group, timing, objectives, etc.)

Program Improvement Plan

What is a program improvement plan?

A program improvement plan is intended to provide programs a format for translating the recommendations made into actions for improvement or maintenance. The plan also identifies who is involved and when the action steps are to be achieved. Programs may find this plan valuable when developing program/department plans as well as the college’s Academic Master Plan.

<p>The table below is an example of a program improvement plan. The necessary elements of the plan are listed and described. A template of this plan is included.</p>	
<p>Recommendation:</p>	
Action step(s)	What action steps must be completed to implement the recommendation?

Estimated implementation date	When does the program expect to begin to implement the action steps?
Estimated completion date	When does the program expect the recommendation to be fully implemented and/or achieved?
Person(s) responsible	Who will take responsibility for seeing that the actions steps are implemented?
Expected Outcome	What is the expected impact/outcome the recommendation will have on the program, the students, and the college, etc. if it is implemented?
Estimated cost(s)	What is the estimated cost of implementing the recommendation? This information will be useful for assisting the Planning & Budgeting for Institutional Effectiveness Committee.
Status Update	Document progress made towards achieving the recommendation.

Chapter 5 – Assessment at Concord University

Contributing to the University Assessment Plan Student Learning Goals of Concord University Reporting

Concord University is taking steps to coordinate and improve its existing assessment program. In addition to assessing student learning within its academic programs, CU administrators and staff will also assess the effectiveness of its various units and departments. The lead supervisor for each program will be responsible for providing specific details regarding expectations and deadlines.

Contributing to the University Assessment Plan

In order to establish a university assessment plan for Concord University, each program (academic and select co-curricular) submit an assessment plan. The assessment plan is a simple document used to organize assessment efforts across the college.

What constitutes and assessment plan?

- Program goals: list the goals for each program in relation to the Educational Goals at Concord University
- Objectives List: the objectives used to measure each goal
- Assessment tools: List and briefly describe the assessment tools used to measure objectives

Student Learning Goals of Concord University

All program goals should relate to one (or more) of Concord University's goals. On the assessment plan, each program should match its student learning goals to the appropriate CU learning goal.

The educational programs of Concord University are designed to foster knowledge/mastery of content, critical thinking, communication, and personal, civic, cultural, and global competence. General education, the core of all undergraduate curricula, is an essential element in an educational process designed around student learning expectations. Continuous improvement of courses, curricula, and programs is essential for institutions to ensure the improvement and sustainability of student learning and effective instruction.

1. Knowledge/Mastery of Content

Students will demonstrate a depth of knowledge and apply the methods of inquiry in a discipline of their choosing, and they will demonstrate a breadth of knowledge across varied disciplines.

2. Critical Thinking

Student will demonstrate the ability to access, analyze, and interpret information, respond and adapt to changing situations, make complex decisions, solve problems, and evaluate actions.

3. Communication

Students will demonstrate the ability to communicate clearly and effectively.

4. Personal, Civic, Cultural, and Global Competence

Students will demonstrate awareness and understanding of the skills necessary to live and work in a diverse world.

When writing program goals, use these educational goals as a reference to ensure that your goals and objectives reflect the university mission and purposes. In addition, this will help with the compilation of an institution – wide plan.

Reporting

Concord University assessment process has evolved over the last decade. The University has focused on the development of programmatic and university-wide assessment based on data collection and analysis. Assessment was placed under the responsibility of the Vice President of Academic Affairs in 1997. A Director of Assessment

and a University-wide assessment committee with representation from the administration, each of the six academic divisions, as well as from student affairs was charged with oversight of university assessment activities shortly thereafter. A regular review of programmatic and university assessment was established and implemented at that time.

In keeping with the West Virginia Higher Education Policy Commission's (WVHEPC) Series 10-Policy Regarding Program Review, Concord University's Board of Governors is responsible for reviewing the viability, adequacy, necessity, and consistency with the University's mission all programs offered by the institution at least once every five years and reporting the results of the program review to the WVHEPC. The WVHEPC is responsible for reviewing the productivity of the University's academic programs for the purpose of continuing or terminating the program. In keeping with WVHEPC Policy, approximately 20% of the University's programs are reviewed each year. (See the Concord University Program Review Schedule).

Each five-year program review includes a self-study that addresses the University's mission, program faculty, the curriculum, resources, student learning outcomes, other learning and service activities, program viability including five-year trend data on majors and graduates, and recommendations for program improvement. As specified by WVHEPC policy, each five-year program review must be reviewed by an outside evaluator from outside the program or outside the institution, as well as by University administrators, and the institutional governing board. At Concord, the outside evaluation is conducted by the University Assessment Committee, the Provost and President, and the Concord University Board of Governors.

In addition to the five-year program review, each academic program is expected to conduct annual program reviews and submit a report to the University Assessment Committee. These reports use a common template to provide programmatic summary data and analysis for each academic year that is used to inform program faculty and drive indicated changes.

The annual University Assessment reports are reviewed by the University Assessment Committee and written feedback/recommendations are provided to program department chairs and University administrators. Annual University Assessment Reports, and the written feedback/recommendations, should be shared and discussed among the faculty in the program.