



ASSESSMENT HANDBOOK

A handbook of practical information for preparing for assessment review

ASSESSMENT COUNCIL

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Chapter 1: What is Assessment?

The A-TEAM (A-TEAM) is working to provide faculty and staff with resources to support institutional assessment of student learning. Please check back often as new resources are being added.

If you are looking for a specific resource and it is not provided here, please contact the Vice-Provost for Educational Improvement and Innovation for assistance: Dr. Constance Tucker at tuckeco@ohsu.edu.

Academic Program Assessment

Academic program assessment is an ongoing process used to measure the extent to which an academic program has achieved its student learning outcomes regarding the knowledge, skills, and abilities of program graduates and to identify changes that will help the program to better achieve those student learning outcomes.

Assessment is an ongoing process of:

- Establishing learning goals
- Providing learning opportunities
- Assessing student learning and
- Using results to inform curricular practices

Academic program assessment is a structured and iterative process in which faculty:

- ✓ Identify the specific knowledge and skills program graduates should possess;
- ✓ Identify specific methods for measuring the knowledge and skills;
- ✓ Interpret the results of those measures of student knowledge and skills;
- ✓ Use those results to make curricular decisions intended to improve student learning;
- ✓ Repeat the process to monitor the effectiveness of curricular changes and to identify additional changes.

Assessment provides the answers to these questions:

- “What do graduates know and what can they do?”
- “What programmatic changes are necessary to improve the knowledge and skills of program graduates?”
- “What did the students learn?” rather than “What did we teach?”.

Academic program assessment should not be thought of as a periodic activity with a finite beginning and end. It is a continuous and ongoing process; each cycle provides information about the degree of success from the previous cycle and informs decisions and activities in the subsequent cycle.

Figure 1: Assessing Student Learning

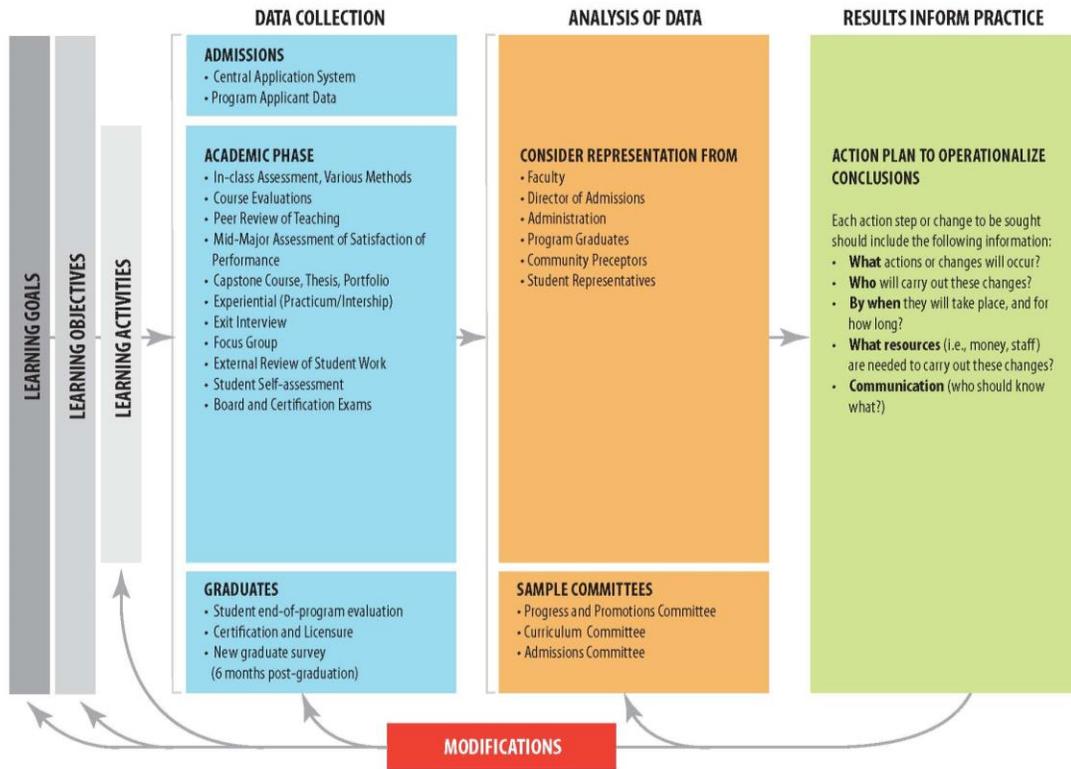


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 CONTENT: CONSTANCE TUCKER, PhD, MA

Difference between assessment and evaluation

Assessment examines the process of students achieving learning goals established for them. Evaluation judges the quality of a program and is not limited to student learning. Evaluation of an academic program can examine faculty recruitment and retention, research, and cost-effectiveness.

The A-TEAM will assist you in developing an assessment plan, engaging in assessment, and revising your plan and initiatives based on the results of your efforts annually. The academic program review committee will evaluate the quality of your program every five years.

Figure 2: The Cycle of Assessment

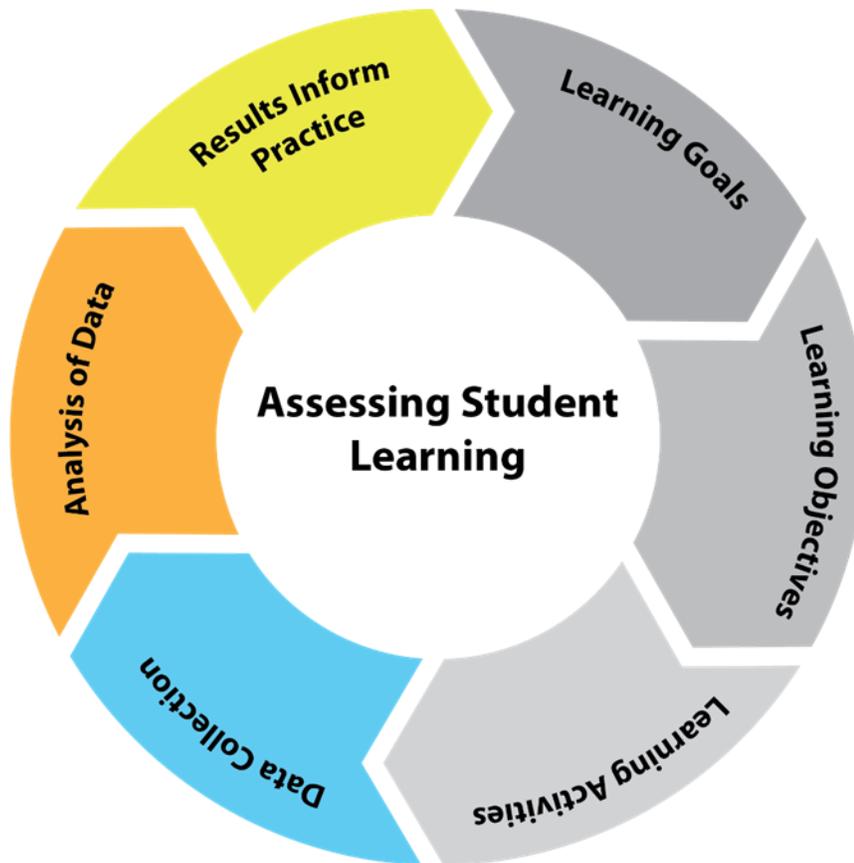


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What are the purposes of the Program Assessment?

- Improving assessment practices.
- Improving student learning. Students learn best in environments that are integrated (appropriate relationship between institutional, program, and course learning goals) and collaborative (experience is designed in partnership with the entire learning community).
- Engaging faculty in assessment practices, particularly discussion about the curriculum and student learning.
- Being accountable and transparent about assessment and student learning to an array of stakeholders externally (NWCCU and other accreditors, parents, and internally (students, faculty, administrators).

How will Program Assessment findings be used?

Internal Reporting and Planning:

Academic programs will use program assessment findings for program review and to improve assessment practices; Executive leadership will use assessment of student learning to inform the strategic planning of the institution.

External Reporting:

The A-TEAM will use program assessment findings to prepare summative reports for NWCCU, and other stakeholders as necessary; accredited programs can use program assessment findings to report to their specialized accreditors on the quality of assessment practices.

Assessment Dictionary:

Assessment:

The ongoing systematic process of 1) establishing SLOs; 2) verifying/validating SLOs; 3) analyzing the results of assessments; and 4) adjusting and improving the results of future Assessment Plans.

Student Learning Outcome:

Identification of measurable characteristics of what a learner should know or do at the end of an educational activity (i.e., course) or degree completion. Program outcomes are usually expressed as knowledge, skills, or attitudes.

Program Evaluation:

A judgment of program quality. Program Evaluation is conducted by the Academic Program Review Committee. A-TEAM will provide programs with feedback that informs curricular, programmatic, and/or strategic planning decisions. The Academic Program Review Committee will evaluate program's ability to utilize A-TEAM feedback to inform changes in their curriculum, program, and strategic planning.

Assessment Plan:

Document describing an Academic Program's SLOs, targets, instruments for learning outcome appraisals, assessment timeline, process for analyzing assessment data, and improvement plans.

Academic Program:

A unique course of study that culminates in the awarding of a specific degree (or certificate) in combination with a specific major. An academic program is characterized by: 1) a coherent and specialized body of knowledge, methods and skills; 2) a faculty-designed curricular path; 3) faculty identification with an organized instructional effort in a subject matter area; 4) increasing complexity in curricular content during the student's period of study; and 5) specified learning outcomes or competency levels expected of program graduates.

Academic Year

Commonly, the academic year is thought of as fall to spring with summer as an optional component at the end. The academic year reporting, however, is centered on a summer to Spring reporting cycle, thus survey and course evaluation data which may be used in an assessment plan, consists of graduates for the summer through spring terms for a given academic year. We encourage assessment reporting for

each academic year to consist of courses, student materials and other data collected from Summer through Spring terms; however, reports may include a different definition of the academic year if this corresponds better with the department's needs.

Direct Assessment:

Students demonstrate their learning through a performance of some kind. Direct measures include exams, projects, and others where the students themselves actually demonstrate their knowledge or skill. Direct measures include student work products such as papers, speeches, and tests, or other observable performances or artifacts. [See p.11 for a list of Direct Assessment Measures.](#)

Goals:

Goals are general statements about what you hope students will gain from your learning activity such as, "Students will gain an understanding of ..." or, "Students will develop an appreciation of ..."

Objectives:

Specific strategies or measurable steps to attain the identified goals.

Indirect Assessment:

An indirect measure is one that provides information from which we can draw inferences about student learning. Indirect measures do not call on students to demonstrate their knowledge or skill, but rely on information reported either by the students themselves or by some third party about the level of student knowledge or ability. Surveys and employment data are the most common indirect measures. Typical indirect measures include surveys, interviews, and focus groups as well as course grades, and retention and graduation rates. Some academic programs use end of course evaluations as an opportunity for students to report on the degree to which the course contributed to learning the expected outcome. [See pg. 11 for list of indirect measures.](#)

Instructional Activity:

A learning activity used to develop competencies of learners.

Assessment Tools:

A method of measurement within a learning activity to ensure competency achievement. Common assessment activities include rubrics, portfolios, and exams. The most commonly used assessment tools are exams, portfolios, rubrics, and university data (e.g. surveys, course evaluations).

Formative Assessment:

Formative assessment is undertaken while a student is learning and the information exams the learning process to make immediate changes. (often low stakes)

Summative Assessment:

Summative assessment is focused on learning outcomes and occurs at the end of a course or program. (often high stakes)

Chapter 2: Assessment Planning: Where to begin?

It is important for program faculty to know the intended program outcomes at the time a program is created. It is equally important for faculty to identify where in the new curriculum students will be exposed to program content, have opportunities to reinforce initial learning on that content, and ultimately demonstrate their knowledge of the content. You may find it helpful to develop a curriculum map at this point to help pinpoint places throughout the curriculum where student learning can and should be assessed.

Each academic program will be asked to update your assessment plan each year when you submit your assessment report. The A-TEAM will review your assessment activities and provide feedback and a letter of compliance upon successful completion to the university Academic Program Review Committee. See the assessment timeline for 2016-2021 below.

Figure 3: 2016-2021 Assessment Timeline



The A-TEAM is available to assist you with assessment planning and curriculum mapping. Please e-mail a specialist at assessment@ohsu.edu.

Assessment Planning includes the following four elements:

1. Purpose Statement
2. Outcomes
3. Measures
4. Performance Criteria
5. Purpose Statement

It is important to consider the institutional, school, and department purpose statements in the assessment planning process. There are several reasons for this:

1. The institutional purpose is the foundation upon which everything we do should be based. School purpose statements, and, in turn, program purpose statements, should flow from and directly support the overall institutional purpose. It should not be difficult to “connect the dots” and see the relationships among an institution and the academic and non-academic units that compose it.
2. Accreditors will evaluate how well an institution executes its purpose through its academic programs and other endeavors.

3. Because it can be easy to forget the importance of institutional, school, and department purposes in all that we do, assessment planning time provides an excellent opportunity to call our attention back to these statements of who we are and what we are about. This may prompt some faculty to review school or department purpose statements and consider whether it is time to update them. That, in turn, may prompt fresh thinking about curriculum planning or other activities. Although this is not the primary purpose of assessment planning, it is one example of the unexpected benefits that some faculty report as a result of this process.
4. Assessment outcomes must be directly related to the department purpose (and, by extension, those of the school and institution). You will be asked to evaluate these relationships as we prepare to develop outcomes.

The OHSU A-TEAM does not evaluate the quality of the purpose statements prepared by our academic or non-academic units, nor do we evaluate the strength of the relationships among them or the programs being assessed. We collect this information only to help our faculty to focus on the issues outlined above.

The A-TEAM is interested in the quality and rigor of assessment in ways that expose learner competence, performance, and impact on patient health. Donald E. Moore Jr., PhD from Vanderbilt University School of Medicine, has outlined a framework for the assessment of continuous learning and traditionally this has been presented as a pyramid consisting of 6 different levels ([Appendix 3](#)):

Moore's Framework for Assessment ([Appendix 3](#))

1. Participation
2. Satisfaction
3. Learning
4. Performance
5. Patient health
6. Population health

The A-TEAM will use Moore's rubric to determine the value of the assessment activities at OHSU. It provides a hierarchy of values related to assessment. For example, an activity that concludes with satisfaction as measured by a self-report survey is not valued as highly as an activity that produces satisfaction and increased knowledge and behavioral modifications. The rubric also guides educators to think about how our learning activities might go beyond learning to improve patient and population health.

Student Learning Outcomes

Guidelines for Writing Effective Program Outcomes

(Adapted from Arizona State University, Office of Evaluation and Educational Effectiveness)

1. Write outcome statements that flow directly from, and support, the program purpose. Think about your program purpose statement. The connection to that purpose (and those of the department, school, and college) should be evident in your program outcomes.
2. Write outcome statements that relate directly to the academic discipline and reflect the knowledge and skills students should acquire. It can be tempting to write program outcomes

that are based on knowledge or skills that are important, but may not be attributable to the curricular content of the program. It is very common to see program outcomes that emphasize writing or critical thinking. Everyone would agree that these are important skills, but students ordinarily acquire those skills across an undergraduate curriculum as general education outcomes. Are they directly attributable to learning acquired in your program? You may consider writing or critical thinking to be very important for graduates of your program. If so, think about how you expect students to demonstrate those skills within the context of your academic discipline.

3. Write outcome statements that are observable and measurable. Focus on observable behaviors rather than what students think, understand, appreciate, etc. We cannot measure what students know or understand, but we can measure how they demonstrate evidence of knowledge and understanding. Avoid outcome statements that say, “Students will know ...,” or “Students will understand ...” When you are tempted to use these, think about what students who know or understand can DO with that knowledge or understanding (See [Appendix 2](#) for verbs that are both observable and measurable).
4. Write outcome statements that focus on knowledge and skills graduates should possess rather than curriculum design, department resources, faculty characteristics, or instructional methods, as these are inputs from the program, not outputs from the students. Additionally, rather than saying that students will learn, students will increase understanding, students will acquire knowledge, etc., express outcomes in terms of what students will be able to do.
5. For programs that have specialized accreditation or certification, write outcome statements that take those assessment expectations into consideration. Some specialized accreditation organizations focus on curriculum design or other inputs rather than student outcomes. For those, you may want to write an outcome statement that addresses an input-based standard from the perspective of student-based outcomes. Some specialized accreditors provide specific learning outcomes that institutions must measure. Although the language and format of those mandated outcomes may not adhere to our guidelines, you should use the specific language provided by the specialized accreditation agency.
6. Write outcome statements that do not combine multiple outcomes in a single statement. Avoid the temptation to bundle everything you value about your program into a lengthy outcome statement. Stay focused on clear and simple outcomes that will yield high quality information. There are times when an outcome must be rather complex in order to capture the complexity of a particular program. We sometimes speak of such outcomes as being so “interwoven” that to separate the elements into separate outcomes would somehow diminish the richness of the assessment. When evaluating your outcome statements, be careful not to lump multiple elements into a single statement unless you truly have a complex outcome for a complex program.

One of the best ways to resolve problems with an outcome statement that consists of multiple outcomes is to collapse them into a single outcome. A very common example is an outcome that refers to program graduates’ ability to “design and conduct research studies, and communicate the results of their research both orally and in writing.” This is easily resolved by saying that program graduates will be able to conduct research. Through the use of a structured rubric, program faculty can separately evaluate students’ ability to design a study, collect data, analyze

data, interpret results, write research reports, and communicate their findings to others. Such a rubric will permit faculty to give feedback (and grades) for each of the separate components, and then arrive at an overall grade for the project. This same approach can be used for any individual or group written or performance projects that can be assigned to students. We will see later that this approach can also yield rich assessment information that can be used to identify specific strengths and weaknesses in your students' abilities.

7. Write outcome statements that are short and concise. Longer statements tend to be vague or include multiple outcomes.
8. Write your outcome statements in the form of "Graduates of the _____ program will be able to _____" or "Graduates of the _____ program will be prepared to _____." This format will help you to avoid many of the problems described in the preceding paragraphs.
9. Align SLO's with OHSU's Core Competencies. Ensure that each SLO is linked to at least one OHSU Core Competency. This is one way to check that the program's mission is in line with the broader OHSU mission overall. In addition to each SLO aligning with a Core Competency, each program should address each Core Competency with at least one of their SLO's. See [Appendix 4](#) for a list of OHSU's Core Competencies.

Examples of Student Learning Outcomes:

Examples that are TOO general and VERY HARD to measure...

- ...will develop problem-solving skills.
- ...will have more confidence in their knowledge of the subject matter.

Examples that are still general and HARD to measure...

- ...will demonstrate the ability to resolve problems that occur in the field.
- ...will demonstrate critical thinking skills, such as problem solving as it relates to social issues.

Examples that are SPECIFIC and relatively EASY to measure...

- ...will be able to identify environmental problems, evaluate problem-solving strategies, and develop science-based solutions.
- ...will demonstrate the ability to evaluate, integrate, and apply appropriate information from various sources to create cohesive, persuasive arguments, and to propose design concepts.

Don't be afraid to consider outcomes that may seem too vague or too difficult to measure. If you have an idea about an outcome that you consider important to your program, but doesn't seem to fit these guidelines, contact the A-TEAM at assessment@ohsu.edu. We may be able to help you identify an appropriate measure for your outcome, or to revise it into something more easily measured. There are high-quality ways in which you can measure critical thinking, creative thinking, ethical reasoning, and other important skills you may value but are hesitant to use.

Guidelines for Effective Measures

(ADAPTED FROM ARIZONA STATE UNIVERSITY, OFFICE OF EVALUATION AND EDUCATIONAL EFFECTIVENESS)

There are several important guidelines to consider when identifying appropriate measures for your outcomes:

1. Avoid creating additional tests or other assessment activities simply to satisfy your assessment data collection needs. It should be possible to identify exams or other measures of student learning that already occur as part of your existing instruction and testing activities. If you have difficulty identifying appropriate measures for an outcome, you may want to consider whether students are being adequately tested on the outcome – or whether the outcome is an appropriate one for your program. If the outcome is an important one, but is not adequately measured, program faculty will need to identify appropriate measures.
2. Course grades are not appropriate measures of student learning. It is appropriate to use the grade on a specific exam, project, etc. that specifically measures student learning on the outcome. Course grades are based on overall satisfaction of course requirements rather than performance on a specific program-level outcome. Those course requirements typically include several course-level outcomes that are likely related to more than one program outcome. Course grades frequently include extra credit for attendance, class participation, or other things unrelated to program outcomes. Course grades alone do not provide specific information about the concepts mastered by students or those concepts that proved challenging – important information for faculty to consider if they want to improve student learning over time.
3. Course completion is not an appropriate measure of student learning. Avoid using completion of a single course or block of courses as a measure. The issues are the same as with course grades.
4. Identify at least one direct measure. The second measure can be direct or indirect.
5. Identify a specific measure. By identifying a specific exam or assignment in a specific course, you are creating a data collection plan for your program assessment. Rather than saying “tests,” say, “Final exam in (course number and course title).” Rather than “research papers,” say, “Research paper in (course number and course title).” For surveys and course evaluations, indicate the specific item(s) that will be used to measure the outcome. For example, “Exit survey item that indicates program's ability to develop student's analytical thinking skills.” Without these specifics, you may be leaving your data collection to chance and fail to collect important information about your students' learning.
6. Don't write a long description of the measure. It is not necessary to describe the content of an exam or assignment, a rationale for its inclusion in your assessment, or the scoring method you will use. This level of detail is appropriate to record in any program or departmental notes or minutes you will maintain.
7. Don't combine multiple measures as one. Avoid combining exams and projects from different courses or even the same course. You may decide to combine the scores for multiple quizzes or homework assignments, to identify a specific subset of test items that relate to the outcome, or to identify a specific subset of survey items that relate to the item. If you decide it is appropriate to do so, ensure the description indicates the measure as an aggregate (e.g., mean score) on the

quizzes or items used. If ever in doubt, determine which is a better indicator of the outcome, or provide both as different measures.

8. **Align Measure with Outcome** Ensure that the measure that you are writing directly illuminates the outcome you are exploring. If the outcome intends to assess writing skills, a direct measure of a classroom writing example or an indirect measure from a survey determining perspectives on student's writing abilities could be used

It is appropriate – and often preferable - to use the same measure for more than one outcome. Capstone projects, doctoral dissertations, and other complex culminating student products typically measure student performance on multiple program outcomes, and are rich sources of information about students’ ability to apply knowledge from across the curriculum.

Considerations for Measures

(ADAPTED FROM ARIZONA STATE UNIVERSITY, OFFICE OF EVALUATION AND EDUCATIONAL EFFECTIVENESS)

Direct vs. Indirect

Identify at least two measures for each outcome. The first measure must be a direct measure, and the second can be direct or indirect.

A direct measure is one in which students demonstrate their learning through a performance of some kind. Direct measures include exams, projects, and others where the students themselves actually demonstrate their knowledge or skill.

An indirect measure is one that provides information from which we can draw inferences about student learning. Indirect measures do not call on students to demonstrate their knowledge or skill, but rely on information reported either by the students themselves or by some third party about the level of student knowledge or ability. Surveys and employment data are the most common indirect measures.

Table 1: Examples of Direct Measurement

Capstone (project/paper/portfolio)	Design projects
Standardized tests (ETS field tests, etc.)	Practical clinical assessments
Presentations/oral defenses	Artistic creations or performances
Classroom exams or quizzes	Classroom discussions
Classroom/homework assignments	Online discussion threads
Course projects	Licensure/certification exams
Papers (research, term, creative, etc.)	Publications/presentations
Internships or practicums	Master’s theses or doctoral dissertations

[Return to page 5: Assessment Dictionary - Direct Assessment](#)

Table 2: Examples of Indirect Measurement

Student surveys & focus groups

Exit surveys and interviews

Alumni surveys and interviews

Employer surveys and interviews

Job placement data

Admission to graduate/professional programs

Course evaluations

[Return to Page 5: Assessment Dictionary – Indirect Assessment](#)

Quantitative vs. Qualitative Measures

A balance of quantitative and qualitative measures is worth considering. Stated basically, quantitative measures consist of meaningful numbers that can be used for further analysis. Qualitative measures require the use of common criteria to look for recurring patterns and themes within student work. Though quantitative is more commonly used as it provides a "definitive" answer to the questions being assessed, qualitative techniques can be beneficial towards building a different perspective to programmatic issues or going further in depth into program performances.

Objective and Subjective Measures

Though similar to quantitative and qualitative, there are definite differences, and plans can benefit from a mixture of both methods. Objective measures hold to a single correct answer that is either correct or incorrect. Subjective measures consist of many different components that can each be assessed for their individual quality. Subjective measures can produce quantitative results (i.e. rubric scores); however, scoring procedures for subjective assessments allow nuances. According to Suskie (2009), there are benefits to both measures:

Advantages of Objective Measures

- Provide information on a broad range of learning goals on a single measure
- Encourage broader learning than subjective assessments
- Fast and Easy to Score
- Can be summarized easier

Advantages of Subjective Measures

- Evaluate many important skills that objective cannot (i.e. synthesis, organization, convergent thinking)
- Assesses skills directly
- Promotes deep and lasting learning

For each measure, a performance criterion will be used to determine the level of performance necessary to ascertain whether student performance on the measure indicates that the program outcome has been achieved. Not all students in a program will perform perfectly on every measure, so program faculty must identify a threshold above which they will be satisfied that, on the whole, students who graduate from the program possess the knowledge or skill specified in the outcome.

Performance criteria must be identified prior to the collection and analysis of assessment data. When setting performance criteria, it can be tempting to set unreasonably high "nothing but the best" standards or to set unreasonably low "guaranteed to show success" standards. Both of these practices

can be defeating. Over time, it is far more beneficial to a program and its students to set reasonable expectations and work toward meeting them.

Avoid setting a performance criterion that says that "100% of students will ____." When tempted to set the threshold at 100%, consider the following scenario. If even a single student in a large program did not meet your expectations on the measure, would you conclude that your program graduates do not possess the knowledge or skill of the outcome? Probably not. Think of a reasonable standard, and set the threshold at that level.

Programs that set performance criteria so low that they are assured of meeting their outcomes present a number of issues. Unreasonably low standards deprive faculty in those programs of the opportunity to identify strengths and weaknesses in their students' performance, thus depriving present and future students of the benefits of program improvements that might otherwise occur. The low standards communicate to current and potential students that the faculty have low expectations for them. A program that establishes low expectations for student performance may not push students to perform at their maximum potential, and may not attract the most qualified applicants.

A performance criterion is written as a statement indicating that some percentage of students will perform at or above a certain level on the measure. Examples:

- 80% or more of students will earn a grade of B or higher on the final exam.
- 75% or more of students will earn a rating of "Meets Expectations" or better on the research paper.
- 90% or more of student papers will be evaluated at a level 3 or higher using the VALUE rubric for Ethical Reasoning.
- 85% of alumni survey respondents will report that they are currently employed in a field that is related or closely related to their degree program.
- 80% of exit survey respondents will report that the BS JPS program contributed "Quite a Bit" or "Very Much" to the development of their critical thinking skills.
- 75% of sampled papers reviewed will be evaluated at a level of "Satisfactory" or higher, using a faculty-developed rubric.
- 85% of students will pass the state licensure exam on the first attempt.
- 80% of doctoral dissertations will receive a rating of "Very Good" or "Outstanding" for methods, using the Lovitts' (2005) rubric.

Course grades and course completion **are not** appropriate for use in performance criteria.

The master's thesis and doctoral dissertation are excellent measures of student learning, but can present a challenge for faculty writing performance criteria. Many programs will set performance criteria that state that a percentage of students will successfully defend the thesis or dissertation on the first attempt. On the face, this seems to be a suitable approach. However, most graduate faculty support and closely supervise their students' thesis and dissertation work and don't schedule the defense until the work is satisfactory. When this is the case, a performance criterion based on success rate of first-time defenses is an artificial threshold, and the program has guaranteed that it will meet the outcome. This practice also deprives programs of the opportunity to examine differences in the level of their students' performances and identify opportunities for improvement.

We recommend using the rubrics presented in Lovitts' (2005) work on the assessment of doctoral assessment. Her work with doctoral faculty at institutions from across the U.S. yielded rubrics for a variety of graduate disciplines that describe the characteristics of the elements of a dissertation (e.g., literature review, methods, analysis, etc.) at four levels: Outstanding, Very Good, Acceptable, Unacceptable. The rubrics can also be used as a model for rubrics to be used for the evaluation of master's theses, for applied or performance projects, or for other disciplines. We encourage programs to use rubrics such as these for a secondary review of theses and dissertations. Such a review is distinct from the traditional defense process, and faculty may or may not choose to share the results of individual reviews with their students. Some programs have found it useful to share rubrics with entering graduate as a means to inform them at an early stage about expectations regarding the quality of their graduate work. For large programs, it is not necessary to review and evaluate every thesis, dissertation, or project. It is acceptable to review a representative sample of student work. Programs that utilize rubrics to evaluate the quality of theses or dissertations will write a performance criterion that indicates that a percentage of students will earn a rating of Acceptable or better on the element that relates directly to the outcome.

Other metrics that promotes student learning:

- Course syllabi, catalogue description
- Interviews and focus groups with learners
- Counts of faculty-student interactions outside of the traditional learning environment
- Dissemination of student learning outcomes to students
- Proportion of class time spent in active learning
- Counts of courses with collaborative learning opportunities
- Hours spent in community-based learning activities
- Library activity (# of books checked out by discipline)
- % of students participating in co-curricular activities
- % attendance to disciplinary seminars and conferences

Chapter 3: Data Collection: Assessment Tools and Resources

ANALYSIS OF DATA
<p>CONSIDER REPRESENTATION FROM</p> <ul style="list-style-type: none">• Faculty• Director of Admissions• Administration• Program Graduates• Community Preceptors• Student Representatives
<p>SAMPLE COMMITTEES</p> <ul style="list-style-type: none">• Progress and Promotions Committee• Curriculum Committee• Admissions Committee

The most commonly used assessment tools are exams, portfolios, rubrics, and university data (e.g. surveys, course evaluations).

Exams:

Either as an objective or subjective assessment, exams can be used for outcome indicators for the completion of a course. When designing an exam both for a course as well as a program assessment, it can be helpful to design a blueprint for the exam. This will help ensure all learning goals are represented and balance among conceptual understanding and thinking skills is struck. This will make the writing of the questions for the exam easier as it is clear what knowledge and which skills a student must demonstrate to meet the learning outcome. Additionally, the test blueprint will make it easier in the review process to pair questions back to their appropriate outcomes, as well as allowing for an in-depth review of the demonstrated skills of each section of the test.

Portfolios

A portfolio can be an effective assessment tool as it allows a student to display a wide variety of learning and skills. Portfolios can show the value added of a student's education as it can demonstrate development across the program. Additionally, portfolios require student reflection upon their work for inclusion in the portfolio, allowing the student to choose how to document their achievement of learning outcomes. This process further involves the student within the assessment process and allows for a very holistic review of learning for students and faculty. Though meant for programs with a smaller number of graduates, any program should be willing to engage in this assessment tool.

Rubrics

For any subjective assessment, rubrics are the most common method for determining student attainment of outcomes. However, when designing a rubric there are a few considerations to be made. First, is the work being addressed holistic or analytic? The difference between these types is that a holistic rubric will result in a single score, thus the criteria being assessed consists of related properties that will be assessed holistically. An analytic rubric consists of criteria that are assessed and scored separately resulting in a composite score. The other element to consider is whether the rubric consists of checklists, ratings, or descriptions. A **checklist** rubric consists of checkboxes that indicate whether a criteria exists or not. **Checklist** rubrics are useful when observing student performance in a laboratory or clinical setting, and can also be used as simple self-assessments. A rating scale rubric determines the level to which a criteria exists in a work or not. A descriptive rubric keeps the ratings but replaces the checkboxes with spaces where brief descriptions can be written in to explain the rating. Often considered a type of rubric, **primary trait analysis** is a way for faculty to specify the exact criteria against which they will judge student work. Using it, faculty create a scale for grading or scoring student work.

To create this scale, they must (1) identify the exact characteristics that they will be looking for; (2) construct a scale; and (3) evaluate the student's work against the scale. The scale can be changed for each type of assignment or task that the student is asked to complete. Most important for the students' benefit, when they know the traits that their work will be judged against, they can more knowledgeably address the assignment. For purposes of program assessment, faculty can construct primary trait scales for each of the types of student work that they will be evaluating, whether the evidence for the assessment is provided by the student portfolios, essays, case study analyses, etc. Primary trait analysis is used to assess a family of tasks rather than one specific task. It focuses attention only on the traits of a particular task that are relevant to the task. (i.e., the most important traits of a science lab report are different from those of a persuasive essay.) A major benefit of primary trait analysis to the assessment process is that it is a tool for faculty to use when working to reach consensus on what is worth evaluating in student work. It can also reduce some of the subjectivity in grading and facilitate more reliable tracking of student progress on important course objectives throughout individual assignments. For programs that want to include outcomes that may seem ambiguous or difficult to measure, consider using AAC&U's Valid Assessment of Learning in Undergraduate Education (VALUE) rubrics. The rubrics were developed as part of a large FIPSE-funded project. More about the project can be found at <http://www.aacu.org/value/>. The rubrics can be downloaded, free of charge, at <http://www.aacu.org/value/rubrics/index.cfm>. Although the rubrics were developed for undergraduate education, they can also be used to measure graduate work. The A-TEAM is also developing rubrics to measure OHSU core competencies ([Appendix 1](#) and [Appendix 4](#)).

University Data

Though indirect, it is important to consider the attitudes, dispositions, and values students assign to their education and learning outcomes. The best method for collecting this information is through the graduating and alumni surveys or the course evaluations. This data indicates students' reflections on their education as a whole in addition to students' behaviors after obtaining the program's learning outcomes. This data can provide new insight into growing fields and expanding learning opportunities to be explored for current students.

Sustainability in Assessment

As you plan assessment logistics, aim not just to get things going, but to keep the momentum going as well. Periodic reporting, review, and fine-tuning of the assessment process are essential to ensuring ongoing engagement of stakeholders in your program. Figure out ways to include assessment thinking and analysis in monthly, weekly, or even daily processes. Ideally, assessment will become a natural part of the program's everyday planning and decision-making. Consider embedding assessment into routine processes such as program review, curriculum approval processes, and performance evaluations.

Interpret Results: Summarizing/Analyzing

Closing the Loop:

Consider the following three areas in which you can use assessment data to help refine your program: **impacting student learning**; **improving the program's assessment tools and processes**; and **informing programmatic changes**. Keep these three areas in mind as you consider the information below on interpreting results and making changes.

Determine the best analysis for your data. The most helpful quantitative information will be tallies, percentages, overall/sub-scores, or averages. Your assessment plan should detail the type of analysis

you will present to determine the performance criteria of the year's cohorts; however, additional analysis may help explain the results of your findings or allow a deeper look at issues of concern or remark. Qualitative summaries, though more difficult to use for performance criteria, may also produce interesting findings when looking at the grouping of issues, themes, accomplishments, and other issues under investigation. A qualitative assessment may provide the most useful data, however, when an issue is detected or a performance criteria has not been met and you are interested in determining causes for student performance at unexpected levels.

If student performance met your expectations, consider components of the program (or of your assessment processes) that you believe contributed to this result. What does this tell you about student learning in this program? You may discuss a recent program change that you believe helped to improve student learning related to the measure. You might decide to focus on ongoing aspects of the program that are particularly strong and should be highlighted. You might also believe that the assessment measure(s) used were particularly well-suited to the outcome and provided high-quality information. Conversely, you might be less than satisfied with student performance, and conclude that one or more of your measures or performance criteria prevented you from identifying that.

If your data indicated that student performance did not meet your expectations on a measure, consider components of the program (or of your assessment processes) that you believe contributed to this result. Are there foundational concepts or theories that students did not adequately apply near the end of their program? If so, at what point in the curriculum could that content have been more strongly emphasized? Was a standardized test used as one of your measures not sufficiently related to your curriculum to adequately measure your students' knowledge? Are the admissions standards for your program too lenient? You might be pleased with your students' performance on the measures used, and now realize that your performance criterion was set at an unrealistically high level. Program faculty, as the experts on the curriculum, are the best suited to judge why student learning on a measure - or for the outcome - did not meet expectations.

What about mixed results?

If one performance criterion was met and the other was not, you will need to interpret the information available in order to determine whether graduates possess the knowledge or skill of the outcome. Consider the following scenario:

- **Measure 1** is supervisor evaluations from an internship experience that requires students to apply their skills in a real-world environment. The performance criterion states that 80% of students will earn an overall rating of 'Meets Expectations' or 'Exceeds Expectations' from their supervisors. Your data indicate that 85% of the students received overall ratings of 'Meets Expectations' or 'Exceeds Expectations.'
- **Measure 2** is an exit survey that asks how well prepared students believe they are for employment in the profession. The performance criterion states that 85% of respondents will report that they believe they are "Well Prepared" or "Very Well Prepared" for employment in the field. Eighty percent of respondents reported that they felt "Well Prepared" or "Very Well Prepared" for employment in the field.

You might believe that the internship is strongly related to the professional skills needed for entry-level positions in the field, and good supervisor evaluations indicate that the students are well-prepared for

employment. If so, you might decide to assign greater weight to the evaluations than to the survey responses and conclude that the outcome was met.

Or, you might know from previous experience that the internship supervisors give high ratings to everyone, even students whom you know performed poorly. In this case, you might assign greater weight to the survey responses than to the internship evaluations and conclude that the outcome was not met.

These situations require your professional judgment as faculty. There is no 'right' answer. The important thing is for program faculty to interpret data about student learning and determine whether students have satisfactorily demonstrated the knowledge or skill of the outcome.

If there are ever doubts, consider additional direct measures. If a performance criteria is not met for a writing example, consider looking at performance in a prerequisite course. Is there a trend of lower performance or is this an isolated incident in student performance? Looking for appropriate patterns in student performance may help identify additional issues for improvement or may help you determine that the measure used in the given year is not the most precise indicator towards measuring outcome achievement. Wherever possible, especially if results are in question, corroborate your findings with related data points.

For your interpretations, it might also benefit to review additional benchmarks and standards in addition to the performance criteria. These may help shed light for new understanding of issues, or might provide a more accurate criteria to which the outcome can be assessed. Some additional types of standards are listed below:

1. **Value-added benchmarks:** comparing scores to scores on a similar or the same assessment measure over time can show how learning gains or detriments have developed over time.
2. **Strengths and weakness standards:** analyzing the sub-scores of an assessment against one another we help illuminate the areas of struggle and success for many students.
3. **Best practice standards:** think about the best performance possible and determine what elements may be lacking between the recorded student abilities and the ideal student performance. This practice of benchmarking will also be helpful even when all performance criteria have been obtained and further learning achievements are sought.

Who will use your findings?

When interpreting your results, successes and strategies for improvement, consider how to best present and disseminate the information to your audience. How is the best way to present data to members of the faculty, staff, and administrators who will be focused on improving the program but may also have their own likes and dislikes within the program? Decisions about directions for improvement are always best when made in consensus with other members of the program where multiple perspectives can additionally be considered.

How about stakeholders of the program who may look to you for accountability? Students are the most direct stakeholder who will look to a program for its success. Consider the methods for answering students concerns and criticisms when even their own needs and priorities may be shifting as they move through the program.

Many members of the university faculty find assessment reporting to be unsettling. Please be assured that the purpose of assessment is not to tally the number of programs that met (or did not meet) one or

more of their outcomes. The purpose of assessment is not to penalize programs that may not have met all their outcomes or to reward those who did. The purpose is to provide an honest and accurate look at where we believe our students fully meet our learning expectations, where we've identified room for improvement, and the strategies we've identified to improve student learning.

Make Changes

If the assessment data indicate that program graduates possess the knowledge or skill of an outcome, program faculty may determine that they have nonetheless identified opportunities for improvement in course content, instructional methods, assessment processes, or other program components that will be implemented during the next assessment cycle. Or, they may determine that they are satisfied that they have adequately measured student learning on the outcome, that program graduates possess the knowledge or skill of the outcome at a satisfactory level, and that no further action is needed. At that point, they will decide whether to include this outcome for consideration in the next assessment cycle or to replace it with another one.

If data indicate that program graduates do not possess the knowledge or skill of the outcome, program faculty should examine the factors they believe contributed to this result, and identify any corrective measures to be taken. Some examples are:

- Addition of course content, tutorials, assignments, or other things designed to reinforce learning on the knowledge or skill of the outcome;
- Change in course sequence or prerequisite;
- More stringent admissions standards; and
- Others identified by program faculty.

If data indicates that program graduates do not possess the knowledge or skill of the outcome, program faculty may determine that student performance on the outcome is satisfactory, but that either the assessment measures selected or the performance criteria established provided an inaccurate view of student learning on the outcome. In this case, program faculty may decide to modify how the outcome is measured, or to reconsider the threshold identified in the performance criterion.

No matter what the proposed revision may be, there are a number of simple steps that will help ensure the interventions effectiveness:

RESULTS INFORM PRACTICE

ACTION PLAN TO OPERATIONALIZE CONCLUSIONS

Each action step or change to be sought should include the following information:

- **What** actions or changes will occur?
- **Who** will carry out these changes?
- **By when** they will take place, and for how long?
- **What resources** (i.e., money, staff) are needed to carry out these changes?
- **Communication** (who should know what?)

1. Create a timetable of implementation. An intervention may be a simple modification or may be a multi-tiered rollout of services and instruction. A timetable of revisions will allow a clear objective and will help the program determine when improvements may begin to be detected. Formative assessment can additionally occur to ensure that the intervention is working as intended.
2. Inform all relevant parties with clear and precise directions of their role in the intervention. All members should be aware of the direction sought as well as the role that they will play towards achieving an outcome.
3. Include the outcome in the subsequent assessment cycle. This will allow faculty to reexamine the issues related to student learning on that outcome.

Chapter 4: Benefits of Assessment & Who Will Use Findings

Engagement of Stakeholders

Assessment is a systematic effort that should involve all members of a program at all levels. At its best assessment can be the catalyst for many positive and lasting changes to the way that students learn in a program:

- Encourages faculty and staff to engage together towards the shared goal of program improvement.
- Shifts attitudes towards a learning centered paradigm that focuses on feedback and reflection amongst all members of the assessment community.
- Prevents issues from being neglected. By encouraging investigation, evaluation, and action, it is the hope that resolutions to issues will be enacted to quickly address student, stakeholder, faculty or staff concerns.

Ensuring a Culture of Assessment

Empower and value; try to keep these ideas in mind when carrying forward assessment activities.

Empower

Faculty and staff will be able to perform best when provided with the appropriate resources and information to carry forward initiatives. These resources can be small, such as providing an open door policy for discussions about ideas for improving issues in student learning or to extend upon already successful endeavors. Flexible yet clear and measurable goals will additionally allow members of the program to take initiative and ownership of ideas related to assessment.

Additionally, as difficult as it can become when working towards the success of students in the learning environment, provide space for all members of the assessment process to reflect on their actions and the larger goals of the program. A space for dialogue, workshops, brown bags, or individual professional development can be very helpful towards allowing members of the program to realize potentials for further exploration.

Value

Look to past or current successes. These efforts should be recognized by assessment leaders and where appropriate provided as a framework for further growth and success. Use data collected from assessment endeavors to further strengthen the program's backing of successful learning initiatives. Successful initiatives should be backed with empirical evidence and important decisions regarding the direction of a program should be based on said evidence. If the values of the program remain on improving the learning outcomes of students, assessment is an auxiliary practice meant to simply support the goals of learning.

Working in a culture of assessment, it is possible that differences of opinion may arise in how to pursue learning goals. Assessment leaders should value all perspectives of the issues, and pursue the path of the highest consensus. A culture of assessment is not a culture free of debate, but it should be a culture that values and considers all options and solutions. Additionally, following "empowerment," if individual approaches are possible in conjunction with additional initiatives, these should be considered and

studied through the assessment process. Innovation and experimentation should be valued and given the support necessary towards success.

Faculty Best Practices and Common Pitfalls

The guiding principle for faculty in the assessment process is to ensure the alignment between learning goals and instruction. There are a large number of steps that faculty can carry forward; this section will cover just a few suggestions for the process of improving assessment activities and learning achievements. For additional best practices and common pitfalls, consult [Appendix 5](#) and [Appendix 6](#).

1. Analyze curriculum. This within itself also has a multitude of possible actions with a few addressed here:
 - a. Curriculum mapping: This will allow a program to analyze the key courses in a student's academic progress to see where learning opportunities arise. By detailing the goals and the degree to which goals are addressed in a course, programs can assess where new learning opportunities may best arise or where gaps might exist within the curriculum. You may also find that while a learning goal is addressed, perhaps no required course examines it to the depth you would expect.
 - b. Syllabus analysis: This will be the best method for determining, in more depth, the criteria and expectations within a single course. Perhaps a process of reviewing syllabi on a regular rotation may be beneficial to ensure courses delve into the expected material and that student expectations can be fully realized with the correct products of the course (test, paper, presentation, etc.)
2. Develop internal principles of good assessment practices. You know what will work best for your program and its needs. Leaders should provide a guideline of expectations and responsibilities. Assessment can seem like a daunting process; however, all members should see the larger goal and know their role towards that goal. Simply clarifying language such as goals vs. outcomes or providing templates of rubrics, can make large steps towards ensuring an internal consistency and steady direction in the assessment process.
3. Take advantage of professional development opportunities to be aware of contemporary teaching methods. Allow time for reflection and contemplation on your own personal performance to see if organic changes can begin within your own courses. These changes can be assessed and may provide a new model down the road for others to follow. For more information please visit the [Teaching and Learning Center website](#) or email them at tlc@ohsu.edu.

APPENDIX 1: Core Values and Rubrics

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Assessment Quality Rubric

OHSU has four core values that guide our work. Three of these values are pertinent to assessment of student learning: transparency, diversity, and quality. Below is a table outlining how the OHSU values are aligned and mapped to the assessment rubric.

Transparency

Transparency builds credibility — and, over time, a sense of program integrity — by creating clarity around key facts in many areas. There is no trust without transparency.

Diversity

The first goal of Vision 2020 captures the centrality of diversity to OHSU values and strategy: “Be a great organization, diverse in people and ideas.” Students learn best in a diverse educational environment, from mentors with varied backgrounds and experiences, and are thus better equipped to treat the increasingly diverse patient population.

Quality

We embrace the pursuit of quality in the broadest possible sense — a commitment to excellence in our purpose areas and integrity in our behavior.

Table A1: OHSU Core Values for Assessment

Transparency	Diversity	Quality
Communication: Purpose statement and measurable SLOs are made public and available	Level of Evaluation Outcomes: Assessment methods cross multiple outcome frameworks	Sustainability: Regular consistent assessment
Alignment: SLOs are aligned with courses. Courses aligned with programs. Programs aligned with OHSUs core competencies.	Culture : Students, Staff, and Faculty actively participate in the learning and assessment process	Progression Difference in statements for different degree/certificate levels.
	Direct/Indirect Data Data used in assessment activities are drawn from both direct and indirect sources	Engagement of Stakeholders All members of the faculty, staff, and students are involved in assessment process.
		Closing the loop: Evaluation of assessment data is linked to improving curriculum and teaching.

To assure alignment of OHSU values and the assessment of student learning, an OHSU assessment rubric was developed. All Assessment Plans and Assessment Reports will be evaluated using the following value based rubric. Please see the next page...

Table A2; Page 1: Assessment Plan/Assessment Report Rubric

Dimension	Exemplary	Weighting Multiplier	Scoring Instructions
Assessment Plan			
Communication of SLOs	Student learning outcomes statements have been prominently posted on the institutional website and made available to students.	1	4 = SLOs are publically available 1 = SLOs are not publically available 0 = No Evidence Provided
Progression (if applicable)	The difference between unique degree/certificate levels is clearly defined in the SLOs. (i.e. There is a progression from certificate to terminal degree)	1	4 = Plan reflects appropriate and clear progression between degree/certificate levels. Or, program does not have multiple levels. 2 = Plan reflects limited or unclear differences between unique degree/certificate levels. 1 = Plan reflects no difference between unique degree/certificate levels. 0 = No Evidence Provided
Measurable SLOs	SLOs are specific and measurable	1	To what extent does the submission provide evidence of meeting the exemplary definition provided? 5 = clear evidence provided that meets the exemplary definition or SLO is not malleable 3 = evidence provided, but either the evidence is unclear or the practice falls short of the exemplary definition; 1 = evidence is alluded to but not provided directly or the practice needs significant improvement to meet the exemplary definition; 0 = no evidence is provided or the evidence provided does not address the practice at all.
Alignment of Core Competencies to SLO's	Alignment of SLO's with OHSU Core Competencies is clear	Evidence of alignment by each group will add 0.25 to the weight (starting at 0) for this section. .25 for each core comp +.25 (for non-clinical programs) = 2.5 The weighting multiplier will range from 0 to 2.5.	To what extent does the submission provide evidence of meeting the exemplary definition provided? 5 = clear evidence provided that meets the exemplary definition; 3 = evidence provided, but either the evidence is unclear or the practice falls short of the exemplary definition; 1 = evidence is alluded to but not provided directly or the practice needs significant improvement to meet the exemplary definition; 0 = no evidence is provided or the evidence provided does not address the practice at all.
Levels of Evaluation Outcomes	Assessment methods cross multiple levels of cognitive complexity and specificity	1	To what extent does the submission provide evidence of meeting the exemplary definition provided? 5 = clear evidence provided that meets the exemplary definition; 3 = evidence provided, but either the evidence is unclear or the practice falls short of the exemplary definition; 1 = evidence is alluded to but not provided directly or the practice needs significant improvement to meet the exemplary definition; 0 = no evidence is provided or the evidence provided does not address the practice at all.
Direct/Indirect Data	Data used in assessment activities are drawn from both direct and indirect sources	1	4 = Both direct and indirect assessment data are collected for SLO's. 2 = Either direct or indirect assessment data is collected for SLO's, but not both. 0 = There is neither direct nor indirect assessment data collected for SLO's.

Table A2; Page 2: Assessment Plan/Assessment Report Rubric

Dimension	Exemplary	Weighting Multiplier	Scoring Instructions
Assessment Report			
<p>Engagement of Stakeholders in Program Assessment Planning & Review</p>	<p>Groups and individuals engaging regularly include representatives from a) faculty; b) staff (i.e. non faculty course coordinators); c) students; d) alumni; e) employers; f) external stakeholders/advisory</p> <p>Regular participation may be annually if the participation involves substantive engagement with assessment work. Participation in report-outs or reading assessment reports without providing feedback or engaging with others does *NOT* qualify as substantive engagement.</p>	<p>Evidence of substantive participation by each group (labeled a through f) will add 0.25 to the weight (starting at 0) for this section.</p> <p>.25 for group a) + .25 for group b) + .25 for group c) + .25 for group d) + .25 for group e) + .25 for group f) = 1.5</p> <p>The weighting multiplier will range from 0 to 1.5.</p>	<p>To what extent does the submission provide evidence of meeting the exemplary definition provided? 5 = clear evidence provided that meets the exemplary definition; 3 = evidence provided, but either the evidence is unclear or the practice falls short of the exemplary definition; 1 = evidence is alluded to but not provided directly or the practice needs significant improvement to meet the exemplary definition; 0 = no evidence is provided or the evidence provided does not address the practice at all.</p>
<p>Closing the Loop: Course Improvement</p>	<p>There is evidence that the program collected, analyzed, and used assessment data to inform improvements to at least one course.</p>	<p>1</p>	<p>To what extent does the submission provide evidence of meeting the exemplary definition provided? 5 = clear evidence provided that meets the exemplary definition; 3 = evidence provided, but either the evidence is unclear or the practice falls short of the exemplary definition; 1 = evidence is alluded to but not provided directly or the practice needs significant improvement to meet the exemplary definition; 0 = no evidence is provided or the evidence provided does not address the practice at all.</p>
<p>Closing the Loop: Incorporation of Course Evaluation Feedback</p>	<p>There is evidence that the program collected, analyzed, and used course evaluation data to inform improvements to at least one course.</p>	<p>1</p>	<p>To what extent does the submission provide evidence of meeting the exemplary definition provided? 5 = clear evidence provided that meets the exemplary definition; 3 = evidence provided, but either the evidence is unclear or the practice falls short of the exemplary definition; 1 = evidence is alluded to but not provided directly or the practice needs significant improvement to meet the exemplary definition; 0 = no evidence is provided or the evidence provided does not address the practice at all.</p>
<p>Closing the Loop: Address Assessment Council Feedback</p>	<p>Program responded to committee's required feedback from previous assessment cycle and no further required changes are necessary</p>	<p>1</p>	<p>To what extent does the submission provide evidence of meeting the exemplary definition provided? 4 = Program provided evidence of addressing all required changes from the previous cycle or program did not have required feedback. 2 = Program provided evidence of addressing some of the required changes from the previous cycle 0 = Program did not provide evidence of addressing required changes.</p>
<p>Inclusion of Sample Rubric</p>	<p>Program submitted a sample assessment method (i.e., rubric) which is well aligned with an OHSU Core Competency.</p>	<p>1</p>	<p>1 = Sample method is provided 0 = No Evidence Provided</p>

Table A3: Examples of SLO Evidence

Element	Examples of Evidence
Communication of SLOs	<ul style="list-style-type: none"> • Department web page that includes the SLOs. • Advising materials or other literature for students and the public.
Measurable SLOs	<ul style="list-style-type: none"> • A copy of the learning outcomes. (Links to websites and other documents are not acceptable.)
Competency	<ul style="list-style-type: none"> • SLO's utilize verbs that cross bloom's taxonomy
Progression (if applicable)	<ul style="list-style-type: none"> • The SLO's utilize verbs to demonstrate a progression of cognitive level appropriate with the certificate/degree program.
Alignment	<ul style="list-style-type: none"> • Criterion is a copy of the curriculum map and/or a <u>direct and accurate link</u> to the curriculum map on a web page.
Culture	<ul style="list-style-type: none"> • A brief narrative demonstrating faculty, staff, and student involvement in assessment, planning data collection, and/or review of data
Data Focus	<ul style="list-style-type: none"> • Example of indirect (i.e., surveys, interviews, and focus groups as well as course grades, and retention and graduation rates) and direct (i.e., student work products such as papers, speeches, and tests, or other observable performances or artifacts) methods • Examples of assessment before, during, and after the program • Examples of qualitative and quantitative assessment
Sustainability	<ul style="list-style-type: none"> • A brief narrative or committee charges concerning processes and procedures for annual review and discussion of assessment findings.
Monitoring	<ul style="list-style-type: none"> • A brief narrative or committee charges concerning processes and procedures for systematic monitoring of the quality and implementation of assessment activities.
Closing the Loop	<ul style="list-style-type: none"> • Action plans, minutes, curriculum proposals, and other department documents that indicate the use of assessment findings to make improvements. • Published literature about program's curricular educational innovations

APPENDIX 2: Bloom's Action Verbs

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Table A4: Bloom's Taxonomy Action Verbs

Definitions	Remember	Understand	Apply	Analyze	Evaluate	Create
Blooms' Definition	Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas.	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.
Verbs	<ul style="list-style-type: none"> • Choose • Define • Find -How • Label • List • Match • Name • Omit • Recall • Relate • Select • Show • Spell • Tell -What -When -Where -Which -Who -Why 	<ul style="list-style-type: none"> • Classify • Compare • Contrast • Demonstrate • Explain • Extend • Illustrate • Infer • Interpret • Outline • Relate • Rephrase • Show • Summarize • Translate 	<ul style="list-style-type: none"> • Apply • Build • Choose • Construct • Develop • Experiment with • Identify • Interview • Make use of • Model • Organize • Plan • Select • Solve • Utilize 	<ul style="list-style-type: none"> • Analyze • Assume • Categorize • Classify • Compare • Conclusion • Contrast • Discover • Dissect • Distinguish • Divide • Examine • Function • Inference • Inspect • List -Motive -Relationships • Simplify • Survey • Take part in • Test for -Theme 	<ul style="list-style-type: none"> • Agree • Appraise • Assess • Award • Choose • Compare • Conclude • Criticize • Decide • Deduct • Defend • Determine • Disprove • Estimate • Evaluate • Explain -Importance -Influence • Interpret • Judge • Justify • Mark • Measure -Opinion • Perceive • Prioritize • Prove • Rate • Recommend • Rule on • Select • Support • Value 	<ul style="list-style-type: none"> • Adapt • Build • Change • Choose • Combine • Compile • Compose • Construct • Create • Delete • Design • Develop • Discuss • Elaborate • Estimate • Formulate • Imagine • Improve • Invent • Make up • Maximize • Minimize • Modify • Original • Originate • Plan • Predict • Propose -Solution • Solve • Suppose • Test -Theory

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APPENDIX 3: Moore’s Outcomes

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Table A5: Moore’s Outcome Framework

Moore’s Outcomes Framework	Miller’s Framework	Description	Sources of Data
LEVEL 1 Participation		Number of learners who participate in the educational activity	Attendance records On line tracking of action within an activity
LEVEL 2 Satisfaction		Degree to which expectations of participants were met regarding the setting and delivery of the educational activity	Questionnaires/surveys completed by attendees after an educational activity
LEVEL 3A Learning: Declarative Knowledge	Knows	The degree to which participants state what the educational activity intended them to know	Direct: Pre and posttests of knowledge Indirect: Self-reported of knowledge gain
LEVEL 3B Learning: Procedural Knowledge	Knows how	The degree to which participants state how to do what the educational activity intended them to know how to do	Direct: Pre and posttests of knowledge Indirect: Self-reported gain in knowledge (e.g., reflective journal.)
LEVEL 4 Competence	Shows how	The degree to which participants show in an educational setting how to do what the educational activity intended them to be able to do	Direct: Observation in educational setting (e.g., checklists, online peer assessment and EHR chart stimulated recall.) Indirect: Self-reported competence, intention to change
LEVEL 5 Performance	Does	The degree to which participants do what the educational activity intended them to be able to do in their practice	Direct: Observed performance in clinical setting, patient charts, administrative databases Indirect: Self-report of performance
LEVEL 6 Patient Health		The degree to which the health status of patients improves due to changes in practice behavior of participants	Direct: Health status measures recorded in patient charts or administrative databases Indirect: Patient self-report of health status
LEVEL 7 Community Health		The degree to which the health status of a community of patients changes due to changes in the practice behavior of participants	Direct: Epidemiological data and reports Indirect: Community self-report

FOR MORE INFORMATION EXAMPLES OF METHODS FOR ASSESSING LEARNING ON MOORE’S EXPANDED OUTCOME FRAMEWORK SEE MOORE’S ARTICLE

1) https://sacme.org/resources/documents/virtual+journal+club/moore_evaluation_article.pdf https://files.aievolution.com/cfm1501/docs/outcomes_measurement_levels.pdf

APPENDIX 4: Core Competencies

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Table A6: OHSU Graduation Core Competencies

All graduates of OHSU degree programs will be able to...

1. PROFESSIONAL KNOWLEDGE AND SKILLS

Demonstrate competence in the core knowledge, skills, and practices as defined by degree programs and relevant professional licensing and credentialing boards.

2. REASONING AND JUDGEMENT

Demonstrate the ability to identify and define problems, critically compare options, make timely decisions or recommendations, identify uncertainties, and use findings to improve outcomes in light of evolving evidence.

3. EVIDENCE-BASED PRACTICE AND RESEARCH

Demonstrate the ability to access, evaluate, and apply relevant science knowledge to support evidence-based health care, disease prevention, health promotion and discovery.

4. LIFELONG LEARNING

Demonstrate the ability to recognize gaps in knowledge and experience through informed self-assessment and reflective practices, and take actions to address those gaps.

5. COMMUNICATION

Demonstrate active listening and oral and written communication skills with diverse individuals, communities, and colleagues to ensure effective, culturally appropriate exchange of information.

6. PROFESSIONALISM AND ETHICS

Demonstrate integrity, honesty, knowledge of ethical principles and the standards of professional conduct, and the ability to apply ethical principles in clinical care, research, education or community service.

7. TEAMWORK

Demonstrate the abilities required to foster and work effectively within collaborative, team-based environments.

8. SAFETY AND QUALITY IMPROVEMENT

Demonstrate the ability to identify situations that compromise safety and participate in risk reduction and continuous quality improvement.

9. SYSTEMS

Demonstrate an appropriate understanding of evolving health care systems, health and science policy, and resource allocation in order to optimize human health and scientific discovery.

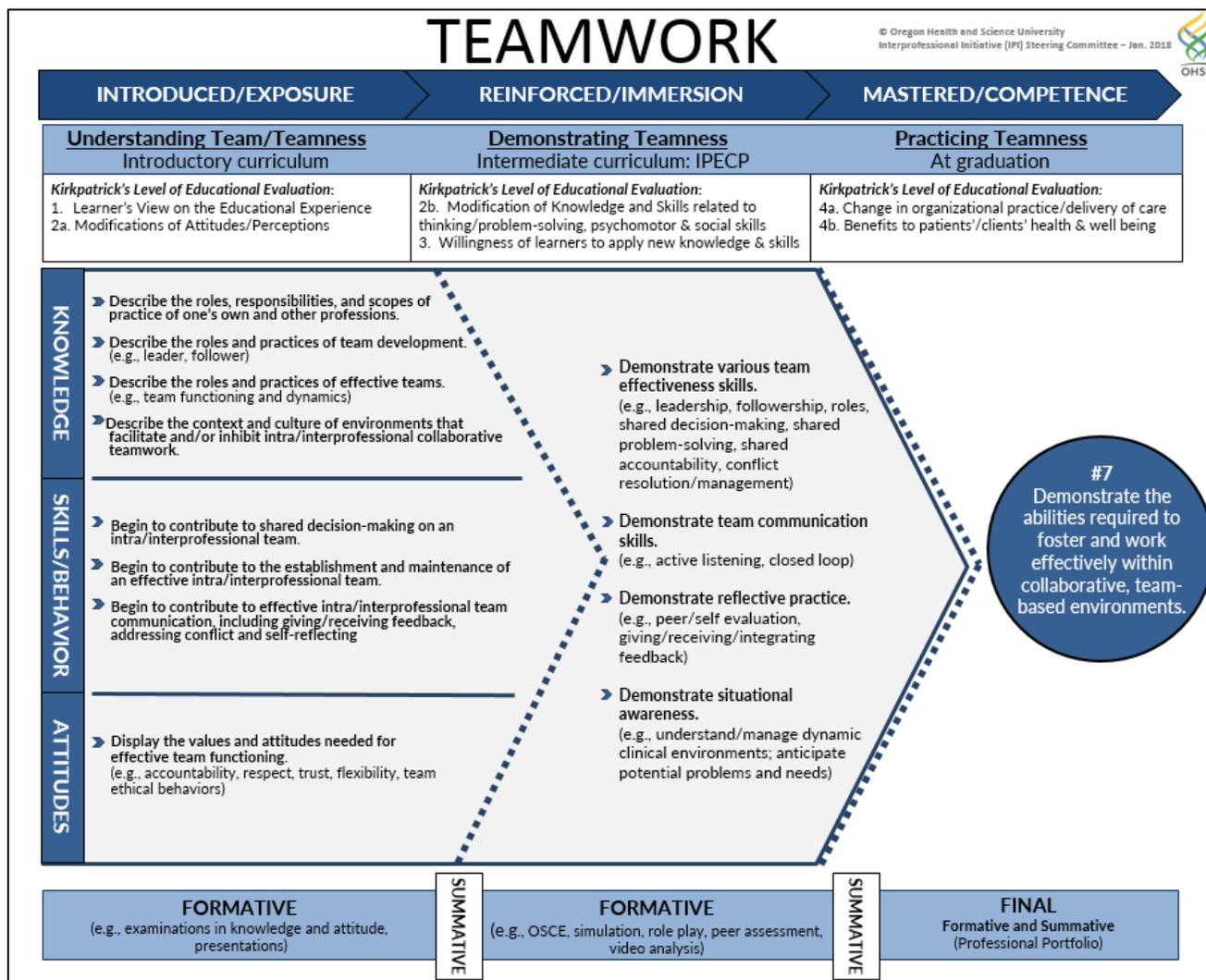
10. PATIENT/CLIENT-CENTERED CARE

Additionally, clinical degree program graduates will be able to...

Demonstrate the ability to collaborate with diverse individuals, families, and communities to provide quality care that is respectful of and responsive to their preferences, needs, attitudes, beliefs and values.

Approved May 2013; Amended March 2016

Figure A1: #7 OHSU graduation Core Competency-Teamwork



APPENDIX 5: Assessment Principles

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ASSESSMENT PRINCIPLES

Principles of Good Practice for Assessing Student Learning

1. The assessment of student learning begins with educational values. Assessment is not an end in itself but a vehicle for educational improvement. Its effective practice, then, begins with and enacts a vision of the kinds of learning we most value for students and strive to help them achieve. Educational values should drive not only what we choose to assess but also how we do so. Where questions about educational purpose and values are skipped over, assessment threatens to be an exercise in measuring what's easy, rather than a process of improving what we really care about.
2. Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time. Learning is a complex process. It entails not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom. Assessment should reflect these understandings by employing a diverse array of methods, including those that call for actual performance, using them over time so as to reveal change, growth, and increasing degrees of integration. Such an approach aims for a more complete and accurate picture of learning, and therefore firmer bases for improving our students' educational experience.
3. Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes. Assessment is a goal-oriented process. It entails comparing educational performance with educational purposes and expectations -- those derived from the institution's purpose, from faculty intentions in program and course design, and from knowledge of students' own goals. Where program purposes lack specificity or agreement, assessment as a process pushes a campus toward clarity about where to aim and what standards to apply; assessment also prompts attention to where and how program goals will be taught and learned. Clear, shared, implementable goals are the cornerstone for assessment that is focused and useful.
4. Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes. Information about outcomes is of high importance; where students "end up" matters greatly. But to improve outcomes, we need to know about student experience along the way -- about the curricula, teaching, and kind of student effort that lead to particular outcomes. Assessment can help us understand which students learn best under what conditions; with such knowledge comes the capacity to improve the whole of their learning.
5. Assessment works best when it is ongoing not episodic. Assessment is a process whose power is cumulative. Though isolated, "one-shot" assessment can be better than none, improvement is best fostered when assessment entails a linked series of activities undertaken over time. This may mean tracking the process of individual students, or of cohorts of students; it may mean collecting the same examples of student performance or using the same instrument terms after term. The point is to monitor progress toward intended goals in a spirit of continuous improvement. Along the way, the assessment process itself should be evaluated and refined in light of emerging insights.
6. Assessment fosters wider improvement when representatives from across the educational community are involved. Student learning is a campus-wide responsibility, and assessment is a way of enacting that responsibility. Thus, while assessment efforts may start small, the aim over time is

to involve people from across the educational community. Faculty play an especially important role, but assessment's questions can't be fully addressed without participation by student-affairs educators, librarians, administrators, and students. Assessment may also involve individuals from beyond the campus (alumni/ae, trustees, employers) whose experience can enrich the sense of appropriate aims and standards for learning. Thus understood, assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement.

7. Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about. Assessment recognizes the value of information in the process of improvement. But to be useful, information must be connected to issues or questions that people really care about. This implies assessment approaches that produce evidence that relevant parties will find credible, suggestive, and applicable to decisions that need to be made. It means thinking in advance about how the information will be used, and by whom. The point of assessment is not to gather data and return "results"; it is a process that starts with the questions of decision-makers, that involves them in the gathering and interpreting of data, and that informs and helps guide continuous improvement.
8. Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change. Assessment alone changes little. Its greatest contribution comes on campuses where the quality of teaching and learning is visibly valued and worked at. On such campuses, the push to improve educational performance is a visible and primary goal of leadership; improving the quality of undergraduate education is central to the institution's planning, budgeting, and personnel decisions. On such campuses, information about learning outcomes is seen as an integral part of decision making, and avidly sought.
9. Through assessment, educators meet responsibilities to students and to the public. There is a compelling public stake in education. As educators, we have a responsibility to the publics that support or depend on us to provide information about the ways in which our students meet goals and expectations. But that responsibility goes beyond the reporting of such information; our deeper obligation -- to ourselves, our students, and society -- is to improve. Those to whom educators are accountable have a corresponding obligation to support such attempts at improvement.

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APPENDIX 6 – Assessment Pitfalls

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Avoiding Assessment Pitfalls:

What Are the Most Common Problems in Assessment Planning?

1. **Selecting inappropriate assessment methods.** Assessment activities are too time-intensive to be squandered in poorly designed plans. Faculty must scrutinize assessment proposals carefully from the standpoint of how well the results will provide evidence consistent with the department's purpose and goals.
2. **Selecting only one or two assessment measures.** Relying on just one or two measures is bound to produce an incomplete picture of what students are accomplishing. Academic programs should consider the array of possibilities and then select the strategies that will capture their achievements and distinctiveness.
3. **Limiting assessment strategies to productivity, viability measures.** Some academic programs may opt to limit their strategies to archival data to reduce the intrusion of assessment into faculty lives. Graduation rates, enrollment figures, and faculty productivity measures simply will not contribute to the development of a vigorous culture of evidence.
4. **Failing to interpret assessment data adequately.** A common error involves academic programs presenting assessment data as if data stands on its own merit. In nearly all cases, appropriate context must be established if the department is to take full advantage of what they have achieved. Setting context provides for a more complete explanation of situational factors that should be considered in interpreting the results of assessment.
5. **Failing to use assessment results to implement change.** The primary purpose of assessment is to promote continuous improvement. Well-designed assessment strategies produce results that hold the key to strengthening the department. The department needs to commit to a careful review of the implications of what data suggests about program improvement.
6. **Failing to exploit positive results.** Some academic programs file the results of their assessment activities upon completion. The faculty may expect that administrators and other stakeholders will be advocates for the department based on the department's reputation. Positive assessment results provide a great opportunity to remind stakeholders of the quality of the department.
7. **Misusing assessment data.** Assessment should emphasize the improvement of student learning. Data generated from the assessment of student learning should not be used for individual faculty evaluation. Administrators need to distinguish appropriate productivity/viability measures for faculty from those that assess student learning. Faculty need to be vigorous in protesting misappropriated data.
8. **Emphasizing compliance with the process more than the results.** Some academic programs demonstrate greater enthusiasm for enacting the assessment strategy as a means of giving evidence to the vigor their campus allegiance. One consequence may be paying less attention to the actual results of the assessment. In the best case, they will lose the opportunity to tout their achievements. In the worst case, they may neglect important feedback that should prompt change. Department

members should evaluate the results purposefully from the standpoint of what directions data suggests for improvement.

9. **Getting swept away by winning the assessment "game".** The assessment challenge sometimes appeals to academic programs as a way of generating proof of their superiority on campus. Not only will such a competitive stance misdirect faculty energies, it will potentially alienate campus partners. Department members must concentrate on collecting data that will help them with the collective goal of improving the curriculum and the quality of student experience.
10. **Making inappropriate comparisons within or across institutions.** Some assessment strategies lend themselves to comparisons that may not be appropriate. For example, the use of standardized commercial tests offer performance norms that do not take into account the actual course preparation students will have had prior to the testing. Alternatively, academic programs may not emphasize in their own curriculum requirements some dimensions of the test. Comparisons of assessment results may mask significant differences in program philosophy, purpose, and curriculum.
11. **Adopting a defensive posture.** Faculty can adopt multiple rationales for resisting involvement in assessment and express their resistance with attitudes and behaviors ranging from hostility through apathy. Assessment can be viewed as a threat to successful programs (status quo). Assessment activities that increase in relation to accreditation demands can be seen as an externally mandated, periodic bother. Assessment may be seen as "add on" work of little importance. Assessment may also be seen as a vehicle that leads to funding reallocation or program discontinuation.

SOURCE: AMERICAN PSYCHOLOGICAL ASSOCIATION (2003). [HTTP://WWW.APA.ORG/ED/AVOID_PITFALLS.HTML](http://www.apa.org/ed/avoid_pitfalls.html)

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