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Introduction

Assessment is essential to ensure that our courses and curricula impact student learning in positive, appropriate, meaningful ways. If assessment is conducted well and on a regular basis, the results help us identify ways to increase the efficacy of teaching and learning.

Meaningful assessment consists of more than tests, surveys, statistics, course evaluations, grades, or summaries of program trends. It requires a clear process for gathering and reflecting on these measures of student learning in order to identify successes and opportunities for improvement. This process must occur on a regular basis, and it should culminate at the end of each cycle with a specific action plan for addressing the salient opportunities or concerns identified through reflection.

The stakes of assessment include more than helping individual students learn more successfully. “Assessment is essential not only to guide the development of individual students but also to monitor and continuously improve the quality of programs, inform prospective students and their parents, and provide evidence of accountability to those who pay our way.”¹ Faculty often feel as though they already have a good, intuitive sense of what is or isn’t working in a program and how to improve, but even if their instincts are right—which they may not be—a regular, structured cycle of assessment (and the documentation it entails) is critical for demonstrating a program’s efficacy and value to other stakeholders, including those who make decisions about resources and accreditation.

Overarching Assessment Principles

- Assessment will help us work more efficiently and effectively towards our main priority: student success.
- It is better to assess ourselves first. Understanding areas in which we can improve makes us stronger.
- Continuous assessment is a natural and necessary part of our commitment to teaching. It plays a critical role in student learning and development.

What is Assessment?

Assessment of student learning is a reflective, iterative, ongoing, formative process done for the purpose of finding ways to improve student success. The process consists of four basic steps:

1) Define the desired student learning outcomes.
2) Choose a method or instrument for gathering evidence of the learning that occurs.
3) Reflect on that evidence with program contributors to identify opportunities and corresponding actions for improvement.
4) Implement the actions identified through reflection to improve student learning.

Assessment does not involve reporting the performance of individuals. It examines learning in the aggregate—at the levels of classes, programs, colleges, and universities.

Academic Program Assessment

This handbook describes assessment that should occur at the academic program level. Program assessment is guided by two primary questions: “What do we want students to learn in our program?” and “How do we know that students are learning what we want them to learn?”

Specifically, academic program assessment involves:

- Establishing clear, measurable, expected outcomes of student learning: what we hope students will know, be able to do, or value upon completion of the program.
- Ensuring that students have sufficient opportunities to achieve those outcomes through the provided curriculum for that program.
- Systematically gathering, analyzing, and interpreting evidence to determine how well student learning matches our expectations.
- Using the findings to understand and improve student learning within the program.

Questions to Consider During Assessment

To ensure assessment is done well, it is important to ask the following questions:

- Do our assessment instruments actually measure what we intend them to measure?
- Are we using the results to make meaningful improvements? (If not, how can we improve or replace our assessment practices to make them more useful?)
- Are there better (e.g. more reliable/efficient/consistent) ways to collect data?
- Based on the results of assessment and faculty input, which areas of student learning make most sense for us to focus on during the next cycle?
- How do we ensure assessment results are shared widely with program contributors so they are aware of strengths, weaknesses, and plans for meaningful improvement?
Steps for Assessing Academic Programs

This handbook will take you through the steps of academic program assessment and will hopefully teach you some best practices to help you and your students get the most out of assessment.

1) **Define Student Learning Outcomes** – Develop a set of specific statements that define what students will know, be able to do, or value upon successfully completing the program.

2) **Identify Learning Opportunities** – Make a curriculum map to show where and how the curriculum addresses each of the program SLOs.

3) **Determine Assessment Methods and Measures** – Identify at least two direct measures to be used to collect data on each SLO to determine whether and how well students are achieving those outcomes. This includes setting expectations for the level of achievement students should be able to demonstrate on those assessments.

4) **Collect and Evaluate the Results** – Examine the information collected and evaluate the results against program expectations.

5) **Use the Results** – Put the information to work by sharing the findings with appropriate stakeholders, identifying actions for improvement, and implementing those actions.
Defining Student Learning Outcomes

Student learning outcomes (SLOs) are specific, measurable descriptions of knowledge, values, or skills that students should be able to demonstrate upon completing a given educational experience. Program-level SLOs are the principal goals you want students to achieve as a result of your program. They describe observable behaviors or products of learning that students should be able to demonstrate by the time they complete the curriculum.

Having well-constructed SLOs is critical—and not just for assessment purposes. Program SLOs serve to capture and clarify the collective vision that faculty, staff, and students are all working to realize together. Besides helping departments understand how to better facilitate student learning, they also help students identify more of the learning opportunities available to them; they enable students to articulate what they’ve learned to peers and employers; and they provide recruiters, advisers, colleagues, administrators, development officers, and alumni with clear talking points that explain a program’s value and impact.

To develop program SLOs, examine each of your program’s goals and ask the following:

- “What specifically would students have to do to convince us this goal has been achieved?”
- “How would we prove to others that students are achieving this goal?”

There is no one ‘right’ way to answer these questions, but a popular and effective approach is to begin each outcome with an action verb. Sample outcomes with this structure might state, for example, that students will be able to: “conduct independent research and organize the findings in an annotated bibliography” or “explain significant historical factors that shaped the system of government in the U.S.” or “communicate meaning effectively through voice and movement for a theater audience.”

One advantage of this approach is that action verbs help to keep the focus on an observable behavior, making it much clearer whether and how the outcome can be assessed. This does not mean SLOs can never address important attitudes, mindsets, or conditions of being that many programs regard as essential goals of their program. With careful thought and creativity, the vital inward effects of learning—what many faculty regard as the “transformative” impact of education—can be linked to appropriately measurable outcomes. In fact, program-level assessment is typically the best means to measure those kinds of effects.

For example, imagine the faculty in a literature program want their students to gain a deeper appreciation for the importance of women writers. Their curriculum might reflect that goal by including a course like “Women in Literature”; however, at the course level, in the space of a single term, it is extremely difficult to measure changes in one’s appreciation toward any subject. It’s also problematic to state it in those terms (“develop a deeper appreciation”) because “appreciation” is not readily observable. If we can’t see it, it isn’t clear how we will measure it. Course-level SLOs are best tied to specific activities or products of learning (e.g., a paper, presentation, exercise, exam) and comparatively modest outcomes that are achievable within a single semester.

Program-level assessment, however, has considerably greater opportunity to probe the deeper kinds of transformations the program’s faculty may really intend. Program-level SLOs should still be
focused on concretely observable results whenever possible to simplify assessment and reporting; however, through the broader lens of program-wide assessment, faculty can be considerably more creative and ambitious in how and what they measure to fill in the picture of what students are really learning.

With regard to measuring “appreciation,” for example, a program could select a relatively early point in the curriculum—say, Introduction to Literature—to have students identify the ten authors they deem most important for their fellow students to read. The same request could be repeated at a much later point—perhaps on an exit survey for graduating seniors—and the results compared to determine if there is a discernible shift in how many and which women writers students identify. This kind of data augments findings from more isolated, course-specific assessments by demonstrating that the impact of the program is greater than the sum of its parts.

The point is that SLO assessment does not have to confine our focus to only the most visible and readily measurable effects of student learning. Programs can and should work to define the deeper, transformative impacts they would like to have on students, and then devise creative ways to make those successes more visible through assessment. The next sections will help you with that.

**Tips for Writing Strong SLOs**

Writing good-quality SLOs is not easy. Here are some tips to help you:

- **Focus on specific, assessable actions.** SLOs should specify actions that are observable, measurable, demonstrable, and able to be communicated clearly to others. Beware verbs or phrases such as “learn,” “know,” “understand,” “appreciate,” “become familiar with,” “become aware of,” “demonstrate knowledge of,” or “demonstrate understanding of,” as these virtually always result in vague and unmeasurable outcomes.

- **Be realistic.** SLOs should be reasonable and achievable based on the capacities of the typical student who enters the program, the expected level of rigor in the program’s curriculum, and the resources available to support student learning.

- **Use action verbs.** Framing your SLOs in terms of action will result in observable, measurable, demonstrable behaviors.

- **Less is more.** You will need to assess and report on all program SLOs within a six-year cycle, with at least three SLOs being actively assessed each year. Try to write the fewest SLOs possible to capture the range of knowledge, skills, and behaviors in your curriculum.

- **Write course SLOs with program SLOs in mind (and vice versa).** Courses shouldn’t exist in silos; they should be integral to the program. Make sure course SLOs are adequately aligned with program SLOs so that course-level data feeds naturally into program-level assessment and in a form that is easy to work with. Likewise, program SLOs should be sufficiently robust that faculty understand how each course fits into the program and how to derive appropriate course-level SLOs to help students progress successfully through the curriculum.
**Knowledge-Centered SLOs**

When constructing knowledge-centered SLOs (i.e., what we want program graduates to know), Bloom’s Taxonomy is extremely helpful. The taxonomy specifies hierarchical levels of thought, arranged in order from the simplest thought operations (memory/recall) to the most complex (knowledge creation). The lower levels are necessary preconditions for higher levels of expertise, and each cognitive ‘level’ is associated with specific demonstrable actions and abilities.

The table below defines each level of Bloom’s Taxonomy, accompanied by a list of action verbs to help you write SLOs that correspond to the expected level of knowledge mastery.²

**TABLE 1: ACTION VERBS FOR KNOWLEDGE SLOs**

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<tr>
<td></td>
<td>Student remembers or recognizes information or specifics as communicated with little personal assimilation.</td>
<td>Student grasps the meaning behind the information and interprets, translates, or comprehends the information.</td>
<td>Student uses information to relate and apply it to a new situation with minimal instructor input.</td>
<td>Student discriminates, organizes, and scrutinizes assumptions in an attempt to identify evidence for a conclusion.</td>
<td>Student creatively applies knowledge and analysis to integrate concepts or construct an overall theory.</td>
<td>Student judges or evaluates information based upon standards and criteria, values and opinions.</td>
</tr>
<tr>
<td>Cite</td>
<td>Convert</td>
<td>Apply</td>
<td>Analyze</td>
<td>Assemble</td>
<td>Access</td>
<td></td>
</tr>
<tr>
<td>Label</td>
<td>Define</td>
<td>Chart</td>
<td>Compare</td>
<td>Create</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List</td>
<td>Describe</td>
<td>Compute</td>
<td>Contrast</td>
<td>Conclude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enumerate</td>
<td>Discuss</td>
<td>Demonstrate</td>
<td>Correlate</td>
<td>Critique</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify</td>
<td>Estimate</td>
<td>Determine</td>
<td>Diagram</td>
<td>Decide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imitate</td>
<td>Explain</td>
<td>Dramatize</td>
<td>Dissect</td>
<td>Defend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Match Name</td>
<td>Generalize</td>
<td>Establish</td>
<td>Differentiate</td>
<td>Diagnose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quote</td>
<td>Identify</td>
<td>Make</td>
<td>Distinguish</td>
<td>Evaluate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recall</td>
<td>Illustrate</td>
<td>Manipulate</td>
<td>Infer</td>
<td>Judge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reproduce</td>
<td>Locate</td>
<td>Prepare</td>
<td>Investagate</td>
<td>Justify</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reproduce</td>
<td>Paraphrase</td>
<td>Project</td>
<td>Limit</td>
<td>Rank</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Restate</td>
<td>Solve</td>
<td>Outline</td>
<td>Recommend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write</td>
<td>Summarize</td>
<td>Use</td>
<td>Separate</td>
<td>Support</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Most Basic → Most Advanced

² Tables of verbs developed by Janet Fulks and Kate Pluta, Bakersfield College, CA
Skill-Centered SLOs

When constructing skill-centered SLOs (i.e., what we want program graduates to be able to do), Simpson’s classifications of the Psychomotor Domain (1972)—which specifies hierarchical levels of skill competence as a result of increasing practice—is extremely helpful.

The table below defines each level of Simpson’s Psychomotor Domain, accompanied by a list of action verbs to help you write SLOs that correspond to the expected level of skill competence.³

### TABLE 2: ACTION VERBS FOR SKILL-CENTERED SLOs

<table>
<thead>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students translate sensory input into physical tasks or activities.</td>
<td>Students are able to replicate a fundamental skill or task.</td>
<td>Students recognize standards or criteria important to perform a skill or task correctly.</td>
<td>Students use standards to evaluate their own performances and make corrections.</td>
<td>Students apply this skill to real life situations.</td>
<td>Students are able to instruct or train others to perform this skill in other situations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hear</th>
<th>Identify</th>
<th>Observe</th>
<th>See</th>
<th>Smell</th>
<th>Taste</th>
<th>Touch</th>
<th>Watch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attempt</td>
<td>Copy</td>
<td>Follow</td>
<td>Imitate</td>
<td>Mimic</td>
<td>Model</td>
<td>Reenact</td>
<td>Repeat</td>
</tr>
<tr>
<td>(Usually no outcomes or objectives are written at this level.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Check</th>
<th>Detect</th>
<th>Discriminate</th>
<th>Differentiate</th>
<th>Distinguish</th>
<th>Notice</th>
<th>Perceive</th>
<th>Recognize</th>
<th>Select</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapt</td>
<td>Adjust</td>
<td>Alter</td>
<td>Change</td>
<td>Correct</td>
<td>Customize</td>
<td>Develop</td>
<td>Improve</td>
<td>Manipulate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Build</th>
<th>Compose</th>
<th>Construct</th>
<th>Create</th>
<th>Design</th>
<th>Originate</th>
<th>Produce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate</td>
<td>Exhibit</td>
<td>Illustrate</td>
<td>Instruct</td>
<td>Teach</td>
<td>Train</td>
<td></td>
</tr>
</tbody>
</table>

Most Basic → Most Advanced

³ Tables of verbs developed by Janet Fulks and Kate Pluta, Bakersfield College, CA
Value-Centered/Affective SLOs

When constructing affective or value-centered SLOs (i.e., what we want program graduates to value, feel, appreciate, take interest in, etc.), the table below—which defines deepening degrees of affective response, accompanied by a list of action verbs—will help you write SLOs that correspond to the expected depth of affective reaction and internalization.⁴

TABLE 3: ACTION VERBS FOR VALUE-CENTERED SLOs

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students become aware of an attitude, behavior, or value.</td>
<td>Students exhibit a reaction or change as a result of exposure to an attitude, behavior, or value.</td>
<td>Students recognize value and display this through involvement or commitment.</td>
<td>Students determine a new value or behavior as important or a priority.</td>
<td>Students integrate consistent behavior as a naturalized value in spite of discomfort or cost. The value is recognized as a part of the person’s character.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accept</th>
<th>Attend</th>
<th>Describe</th>
<th>Explain</th>
<th>Locate</th>
<th>Observe</th>
<th>Realize</th>
<th>Receive</th>
<th>Recognize</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behave</td>
<td>Comply</td>
<td>Cooperate</td>
<td>Discuss</td>
<td>Examine</td>
<td>Follow</td>
<td>Model</td>
<td>Present</td>
<td>Respond</td>
</tr>
<tr>
<td>Accept</td>
<td>Adapt</td>
<td>Balance</td>
<td>Choose</td>
<td>Differentiate</td>
<td>Defend</td>
<td>Influence</td>
<td>Prefer</td>
<td>Recognize</td>
</tr>
<tr>
<td>Adapt</td>
<td>Adjust</td>
<td>Alter</td>
<td>Change</td>
<td>Customize</td>
<td>Develop</td>
<td>Improve</td>
<td>Manipulate</td>
<td>Modify</td>
</tr>
<tr>
<td>Authenticate</td>
<td>Characterize</td>
<td>Defend</td>
<td>Display</td>
<td>Embody</td>
<td>Habituate</td>
<td>Internalize</td>
<td>Produce</td>
<td>Represent</td>
</tr>
</tbody>
</table>

Most Basic → Most Advanced

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⁴ Tables of verbs developed by Janet Fulks and Kate Pluta, Bakersfield College, CA
Identifying Learning Opportunities (Curriculum Mapping)

Curriculum mapping is the process of relating each program SLO to specific program courses, co-curricular programs, and/or other learning activities intended to advance that outcome. Curriculum maps often take the form of a matrix, with SLOs represented on one axis and associated learning activities (i.e. coursework and other experiences) represented on the other axis.

For each SLO, the curriculum map should clearly indicate the course or learning activity where the relevant information is Introduced, Reinforced, and Assessed. (Note that all three of these—introducing, reinforcing, assessing—may occur within a single course.)

The Value of Curriculum Maps

Curriculum maps are useful for analyzing how well the included courses are working in concert to serve student needs and achieve the program’s overarching goals. Specifically, they can help answer the following questions:

**Is the curriculum designed to ensure that every student has enough opportunity to achieve each of its key learning goals?** A program curriculum map will let you know if a program learning goal is addressed only in elective courses or only in one course.

**Is the curriculum appropriately coherent?** Is it designed so students strengthen their achievement of program learning goals as they progress through the program? Or is attention to program learning goals scattershot and disconnected?

**Does the curriculum give students ample and diverse opportunities to achieve its learning goals?** Many learning goals are best achieved when students experience them in diverse settings, such as courses with a variety of foci.

**Does the curriculum have appropriate, progressive rigor?** Do higher-numbered courses address program learning goals on a more advanced level than introductory courses? While excessive prerequisites may be a barrier to completion, do upper-level courses have appropriate prerequisites to ensure that students in them tackle program learning goals at an appropriately advanced level?

**Does the curriculum conclude with a capstone experience?** Not only is this an excellent opportunity for students to integrate and synthesize their learning, but it is an opportunity for students to demonstrate their achievement of program learning goals as they approach graduation. A program curriculum map will tell you if you have a true capstone in which students synthesize their achievement of multiple program learning goals.

---

Is the curriculum sufficiently focused and simple? You should be able to view the curriculum map on one piece of paper or computer screen. If you cannot do this, your curriculum is probably too complicated and therefore might be a barrier to student success.

Is the curriculum responsive to the needs of students, employers, and society? Look at how many program learning goals are addressed in the program’s internship, field experience, or service learning requirements. If a number of learning goals are not addressed there, the learning goals may not be focusing sufficiently on what students most need to learn for post-graduation success.

(Oh, and, yes, curriculum maps can also be used to identify the best places to assess the curriculum’s learning goals—typically in courses or other requirements that students typically complete right before graduating. But I don’t think that should be the main purpose of a curriculum map, because you can figure that out without going to the trouble of creating a curriculum map.)

Program curriculum maps with the following traits can best help answer these questions.

• **Elective courses have no place in a curriculum map.** Remember one of the purposes is to ensure that the curriculum is designed to ensure that every student has enough opportunity to achieve every learning goal. Electives do not help with this analysis.

• **List program requirements, not program courses.** If students can choose from any of four courses to fulfill a particular requirement, for example, group those four courses together and mark only the program learning outcomes that all four courses address.

• **Codes can help identify if the curriculum has appropriate, progressive rigor.** Some assessment management systems require codes indicating whether a learning goal is introduced, developed further, or demonstrated in each course, rather than simply whether it is addressed in the course.

Check off a course only if students are graded on their progress toward achieving the learning goal. Cast a suspicious eye at courses for which every program learning goal is checked off. How can those courses meaningfully address all those goals?
Determining Assessment Methods and Measures

Selection of assessment measures can only be accomplished after, first, clearly articulating student-learning outcomes (SLOs) and, second, ensuring that the academic program curriculum provides students with learning experiences relevant to the SLOs. Assessment methods should be directly tied to program SLOs and curriculum.

Direct vs. Indirect Assessment

Assessment methods are typically categorized as one of two types: direct or indirect.

- **Direct assessment** asks students to demonstrate their acquired knowledge, values, or skills. The resulting evidence is visible/tangible and thus, tends to be more compelling at demonstrating what students have actually learned by showing it, directly, from their work and performance. Assessment plans should incorporate at least two direct assessments for each SLO.

- **Indirect assessment** measures students’ perceptions about, or satisfaction with, their learning experience—such as a survey in which students self-report what they have learned. Since student self-reports may inflate or undervalue what they have actually learned, this kind of evidence is less compelling, but it can be extremely helpful to support and contextualize data from direct assessment.

The tables below list a number of direct and indirect strategies to consider.

**TABLE 4: SAMPLE APPROACHES TO DIRECT ASSESSMENT**

<table>
<thead>
<tr>
<th>Direct Assessment Methods</th>
<th>Sample Approaches</th>
</tr>
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<tbody>
<tr>
<td>Course Data</td>
<td>• Objective Tests (e.g., multiple choice, true/false, fill-in-the-blank)</td>
</tr>
<tr>
<td></td>
<td>• Essay Tests</td>
</tr>
<tr>
<td></td>
<td>• Embedded Questions and/or Assignments</td>
</tr>
<tr>
<td></td>
<td>• Other Classroom Assessment Techniques (e.g., 1-minute papers, free-writing, etc.)</td>
</tr>
<tr>
<td>Individual Projects/Performance</td>
<td>• Written Products (e.g., term papers, lab reports, critiques)</td>
</tr>
<tr>
<td></td>
<td>• Oral Presentations (e.g., speeches, role plays)</td>
</tr>
<tr>
<td></td>
<td>• Poster Presentations</td>
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<tr>
<td></td>
<td>• Structural/Situational Assessments</td>
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<tr>
<td>Summative (End of Program) Performance</td>
<td>• Standardized Tests</td>
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<tr>
<td></td>
<td>• Locally-Developed Exams</td>
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<td></td>
<td>• Capstone Experiences</td>
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<td></td>
<td>• Internships/Professional Applications</td>
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<td></td>
<td>• Portfolios</td>
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<tr>
<td>Collaborative Activities</td>
<td>• Research and Group Projects (written and oral)</td>
</tr>
<tr>
<td></td>
<td>• Online Group Activities (e.g., records of interactions in discussion forums)</td>
</tr>
</tbody>
</table>
At times, the distinction between direct and indirect assessment can seem murky. Consider peer reviews of student work, for example. In peer review, students actually submit work to demonstrate what they have learned; however, a faculty member may not ever see or have an opportunity to evaluate it in this process. So is this direct or indirect assessment?

A few considerations can be helpful in determining whether an assessment is direct or indirect evidence of student learning.

1. **Does the assessment measure the learning or a proxy for learning?**

   **Direct Evidence**: Students have completed some work or exercise that demonstrates they have achieved the learning outcome. Examples: project, paper, performance.

   **Indirect Evidence**: A proxy measure was used, such as the number of students who participated in a learning activity or surveyed opinions about student learning, satisfaction, etc. Examples: teaching evaluations, surveys asking students how much they think they learned, course grades (which may or may not correlate with actual improvements in performance and thus, are not acceptable as direct measures; see *Course Grades Have No Place in Program Assessment* below).

2. **Who decides what was learned or how well it was learned?**

   **Direct Assessment**: a professional makes a decision regarding what a student learned and how well it was learned. Examples: papers, tests, or performances evaluated directly by the instructor, program director, curriculum oversight committee, department chair, or other appropriate representative of the program.

   **Indirect Assessment**: the student decides what he or she learned and how well it was learned. Examples: surveys, teaching evaluations, student focus groups.
Selecting Assessment Methods

When choosing an assessment method, ask yourself these questions:6

1. Will the assessment strategy answer questions that are important and meaningful to the program?
2. Does the strategy align with the outcome being assessed?
3. Is the strategy feasible given available financial resources and time?
4. Will the strategy result in useful information about strengths and weaknesses of the program?

The following tips will help to ease the work of collecting and reporting on your assessment data:

- **Whenever possible, use existing information:** Exams, assignments, or projects in key program courses can be used for program-level assessment if they are consistent across course sections and representative of program requirements.

- **Use capstone experiences or senior course assignments:** These are typically common to all students completing the program and demonstrate the breadth and depth of students’ acquired knowledge and skills.

- **Strive to use multiple measures to assess each SLO:** This increases confidence that the results through assessment are accurate, consistent, and replicable. Each SLO should include at least two direct measures.

- **Don’t reinvent the wheel:** Take advantage of published assessment tools in your disciplines, such as rubrics or surveys, as opposed to developing your own.

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6 Adapted from the Ball State University Assessment Workbook.
Collecting and Evaluating Assessment Results

With clearly written SLOs and properly selected assessment measures, collecting results should be fairly straightforward. However, before these results can be used, they need to be summarized, compared against specified benchmarks and targets, and reported.

The following are ways to collect assessment results to create a meaningful picture of what students are (or are not) learning:

- **Tallies**: Take a simple count of the number of students who successfully demonstrated a particular level of performance. For example, you could tally the number of students who earned a specific rubric rating, or who selected a specific response on an exam question.

- **Percentages**: Percentages are often more meaningful than presenting raw numbers (tallies) as they facilitate peer and historical comparisons across different groups of students. For example, you could report the percentage of students who earned a specific rubric rating or selected a specific response on an exam question and then examine the percentage change in these values over time.

- **Aggregates**: In many cases, multiple items on a rubric, exam, or survey relate to a single SLO. In those cases, it is appropriate to report tallies or percentages of students who exhibited a particular type or level of performance across all of the relevant items. For example, perhaps 80% of students correctly responded to the four exam questions targeting understanding of Research Design, but only 40% responded correctly to the two questions targeting understanding of Quantitative Analysis.

- **Averages**: Averages, including the arithmetic mean, median (i.e., the middle score), and mode (i.e., the most frequent response) can be used to summarize the central tendency of assessment results and to compare results to national benchmarks.

- **Qualitative Summaries**: Qualitative assessment methods (e.g., reflective writing, focus groups, open-ended survey questions) can be analyzed via read-throughs and grouped listings. Read-throughs simply involve quickly reading qualitative results to get a general sense of common responses. Grouped listings involve separating or tallying qualitative results into common, discrete categories (e.g., perhaps 10% of alumni indicated that performing a group research project was most influential to their learning in the program on an open-ended survey item, whereas 60% mentioned that participating in a practicum experience was most influential).

Course Grades Have No Place in Program Assessment

Although many feel it is natural or even necessary to include course grades in program assessment reports, this is highly problematic. **Course grades have no place in program assessment.** There are several reasons for this:

- If course grades are reported alongside personally identifying information (PII), this can result in a breach of student confidentiality. Often, assessment data is shared with accreditors and site reviewers who need to review it for quality assurance purposes, but who should not have access to information about individual students’ academic performance.
• Course grades do not demonstrate what, specifically, students have (or have not) learned from a course. They routinely reflect additional considerations (e.g., attendance, participation, effort) that do not directly reflect learning.

• Course grades may be, and often are, adjusted or “curved” in light of variations in the performance of individuals or specific classes/populations of students. This makes them particularly unreliable for identifying accurate trends in student learning across multiple years or courses.

In short, course grades are ill-suited and inappropriate for the purposes of program assessment. Proper program assessment examines patterns of student learning in and across courses, as well as over time. It uses direct measures of specific behaviors or products of learning to identify what students have (or have not) learned in a more consistent, confirmable way than what is reflected in a course grade.

Reporting Assessment Findings

Assessment reports should include a description of the sample of students participating in assessment, a clear description or copy of each assessment instrument/measure used, and a summary or de-identified copy of the results attained from each method. After the assessment results have been appropriately summarized, they should be compared against the associated benchmark or target.

IMPORTANT: Assessment reports and any supporting documentation should never include personally identifying information (PII) about our students (e.g., names, ID numbers) especially in connection with academic grade or performance-related information. This information is unnecessary for effective program assessment and reflection. More importantly, these reports need to be accessible to external site visitors for accreditation purposes, so including PII could lead to FERPA violations.

The goal of program assessment is to drive continuous improvement. Identifying areas in need of improvement does not constitute failure; on the contrary, it’s essential to guide forward action and promote positive change. Programs will not be judged on their results; instead, they are evaluated on the extent to which they demonstrate due diligence to gather and use those results to make intelligent, ongoing improvements.
Using the Results of Assessment

Using assessment results effectively—often called “closing the loop”—is the most challenging, yet most critical component of the assessment process. Assessment, by itself, does not result in improved student learning. The results must be reflected upon and combined with professional judgment to make intelligent, informed decisions that result in improved student learning. These decisions must be communicated widely and transparently, and put clearly into action so that students can benefit from the results.

The table below describes sample actions that might be derived from assessment results that expose weaknesses in various areas related to a program.

**TABLE 6: SAMPLE ACTIONS FOR THE USE OF ASSESSMENT RESULTS**

<table>
<thead>
<tr>
<th>Area of Assessment Findings</th>
<th>Sample Actions</th>
</tr>
</thead>
</table>
| Curriculum                  | • Modifying the frequency and schedule of course offerings  
                                 • Adding or removing course from the curriculum  
                                 • Pedagogical models or approaches to be shared among faculty and students  
                                 • Revision of course content or assignments |
| Budget/Resources             | • Increasing classroom space  
                                 • Adding lab resources  
                                 • Hiring or re-assigning faculty or staff  
                                 **NOTE:** Merely requesting more classroom/lab space or new hires is not a sufficient action to “close the loop” to improve student learning. Such resources have to actually be obtained and provided to students. Unless that is certain to occur, your plan must include other acceptable actions that definitely will be implemented. |
| Academic Process            | • Revising course prerequisites  
                                 • Revising criteria for admission to the program  
                                 • Revising advising processes or protocols |
| Promotion/Marketing         | • Communicating and celebrating student performance and success  
                                 • Communicating student voices and perceptions to stakeholders  
                                 • Industry feedback from external assessments  
                                 • Including student work on the program website, recruiting materials, fundraising materials or in the self-study  
                                 **NOTE:** These Promotion/Marketing actions are not sufficient to “close the loop” to improve student learning, but they are useful ways to extend the benefits of positive findings from good assessment. Your plan must still include other acceptable actions that definitely will be implemented to improve learning. |
Responsible Assessment

Linda Suskie recommends the following guidelines to ensure that the use of assessment results is fair, ethical, and responsible:

1. Make assessments planned and purposeful: There should be a clear understanding at the outset of why the program is engaging in assessment and the types of decisions that assessment will inform.
2. Focus assessments on important learning goals.
3. Assess teaching and learning processes, not just outcomes, in order to make sense of outcomes.
4. Actively involve those with a stake in decisions stemming from the results in discussions about assessment and use of results.
5. Communicate assessment information widely and transparently.
6. Discourage others from making inappropriate interpretations of assessment results. For example, communicate the limitations of assessment techniques, sampling, and other factors that could affect the accuracy and replicability of the results.
7. Don’t hold people accountable for things that they cannot control.
8. Don’t penalize faculty and staff for disappointing assessment results.
9. Don’t let assessment results alone dictate decisions. Decisions should be based on sound professional judgment.
10. Promote the use of multiple sources of information when making decisions.
11. Keep faculty, students, and staff informed on how assessment findings are being used to inform decisions.

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College Review of Program SLO Assessment

Annually, colleges are required to conduct a systematic review of the assessment practices occurring in all degree programs and standalone certificates. (Embedded certificates which may be attained via coursework wholly contained within a larger degree program do not require separate review since review is already occurring at the degree level.) In Pamplin, this responsibility is performed by the Pamplin Curriculum Committee.

The purpose of this annual review is to ensure that all programs are appropriately engaged in continual, meaningful efforts to assess their impact on students and using the findings to guide reasonable, specific actions to improve teaching and learning. Programs must document and report their ongoing performance of these quality assurance efforts for stakeholders, including accreditors. Likewise, colleges must demonstrate that they provide appropriate oversight by routinely vetting the quality of the assessment activities occurring in their programs.

Importantly, the college’s review does not judge how effectively programs teach or produce successful students. The salient concern is whether programs are routinely examining their strengths and weaknesses to make steady, ongoing improvements to what they do. It is not only acceptable, but preferable, for a program to report that they are failing to achieve some of the things they set out to do. From the standpoint of quality assurance, this suggests that intentional assessment is occurring and helping to identify areas that need improvement. As long as these findings culminate in sensible action for the better, that is a success!

The Focus of the Review

When reviewing programs in the college, the Pamplin Curriculum Committee has two principal concerns:

1. **Quality of the Assessment Design for the Current Academic Year**
   Are the SLOs and accompanying measures the program has chosen to focus on this year sufficiently well-constructed to capture useful data that will help the program meaningfully assess the impact it is having on students?

2. **Appropriate Use of Results from the Last Academic Year**
   Did the program examine the results from the last cycle of assessment and identify reasonable action(s) to improve some of the issues or concerns they identified?

To guide the college curriculum committee in answering these questions, the Augusta University SLO Advisory Committee has developed an **SLO Assessment Rubric** (Appendix I). Department chairs, program directors, and any faculty or staff who have responsibilities for program assessment should acquaint themselves with this rubric.
The Review Process

Every fall, the Pamplin Curriculum Committee reviews assessment practices for all degree programs and standalone certificates within the college. The information they review is obtained from Campus Labs, the reporting system used by chairs and program directors who oversee assessment. Members of the Curriculum Committee may access this information directly in Campus Labs if they have received appropriate training and access; alternatively, they may access the same information exported and uploaded to BOX by the college’s designated Planning and Assessment Coordinator, Wade Caldwell (wcaldwell@augusta.edu). Any members of the College Curriculum Committee who need training in SLO assessment may also contact Wade for the dates and times of upcoming training workshops.

By September 30, all chairs and program directors are expected to have finalized the collection of the past academic year’s SLO assessment data, reported the findings and actions for improvement, and identified the SLOs and measures they plan to use for program assessment during the current academic year. This information is reported in Campus Labs.

From October 1 to November 15, the College Curriculum Committee reviews the information reported by each program, using the SLO Assessment Rubric (Appendix I) to evaluate the quality of the SLOs and measures the program has identified for the current year, as well as the use of results from the past year’s assessment cycle (see The Focus of the Review above). The committee may elect to divide up the workload by assigning programs to specific members of the committee; however, all programs should be reviewed by at least two members of the committee, and all findings should be discussed with the full committee before relaying them to the program.

As the review of each program is completed, the committee chair (or another appropriate designee) will email a copy of the committee’s findings to the appropriate department chair or program director. In the case of program directors, their department chair should be copied on that email. In all cases, the Director of College Assessment, Dr. Kim Gray (kim.gray@augusta.edu) should be copied as well.

Review findings must be communicated to all programs no later than November 15.

By December 15, the chair or program director associated with each program should review the findings from the Pamplin Curriculum Committee and submit changes in Campus Labs to address any concerns or recommendations for improvement. Programs are not required to follow the committee’s recommendations to the letter. The committee’s input is intended as constructive guidance, but programs retain the right and responsibility to make final decisions about how best to address any issues or concerns the committee has identified. If a program strongly disagrees with the findings, the chair or program director should contact Dr. Kim Gray to discuss those concerns.

All necessary changes must be incorporated in Campus Labs no later than December 15.

Also by December 15, the chair of the Pamplin Curriculum Committee will draft a letter to the Dean that indicates the committee has completed its annual review of program SLO assessment, summarizes the findings (in terms of the relative health of assessment practices occurring across the
college’s programs), and offers any recommendations that might improve either the review process itself or the effectiveness of how programs conduct assessment.

By January 15, the Director of College Assessment will confer with the Dean and the Associate Dean for Faculty Affairs to ensure awareness of the year’s findings and discuss any concerns that may have been identified.

By January 30, the college will close out the review process by uploading to Campus Labs a signed letter from the Dean which indicates that the college has completed its annual review and that programs have taken steps to address and incorporate the findings appropriately.

If, for any reason, the college has not been able to complete its review of certain programs or those programs have not been able to make adjustments based on the findings, that fact will be clearly noted in the letter, along with a brief explanation and anticipated timeline for completing that work.
Using the SLO Assessment Rubric

Augusta University’s SLO Advisory Committee developed the SLO Assessment Rubric (Appendix I) to assist colleges in assuring the quality and efficacy of assessment practices within their programs.

The rubric emphasizes four key elements of effective program assessment; namely:

• the clarity/quality of the program’s SLO statements
• the quality/suitability of the methods and measures used to assess each SLO
• the clarity/coherence of the program’s analysis of assessment findings
• the clarity/coherence of the actions identified for improvement

Samples of acceptable and problematic practices in each of these areas are provided below.

Evaluating the Quality of SLOs

Per the criteria specified by the university’s SLO Assessment Rubric (Appendix I), SLO statements must identify specific knowledge, skills, or behaviors to be gained, and must be stated in a manner that is clear, focused, and measurable.

Below are some examples of strong, acceptable, and unacceptable SLOs according to these criteria:

**Strong**

**SLO:** Students will be able to critically analyze social and cultural phenomena using evidence from quality anthropological sources.

**SLO:** Students will be able to critically assess anthropological theories and methods.

**SLO:** Students will demonstrate and apply knowledge of core criminological concepts and theory.

**Acceptable**

**SLO:** Students will demonstrate ability to communicate in various genres of writing appropriate to the communication professions.

The phrases “demonstrate ability,” “various genres,” and “communication professions” create a sense of vagueness. It’s possible to infer the skill to be measured, but simpler, more precise wording would clarify greatly. A better version: “Students will be able to write for multiple genres of professional communication.”

**SLO:** Students will understand social phenomenon through sociological theories and concepts.

“Understanding” is not inherently measurable. It’s possible to infer the skill to be measured, but putting the focus on observable, measurable actions will improve this SLO considerably. A better version: “Students will identify and apply sociological theories and concepts to explain social phenomenon.”
Unacceptable

**SLO:** Students will be able to practice scholarly neutrality.

This SLO does is not expressed in clear, measurable terms. It should specify a clear behavior associated with neutrality. For example, “Students will be able to identify and explain valid points of contention that underlie opposing viewpoints.”

**SLO:** Students will be able to teach history in the secondary school context.

Although a skill (“teach”) is stated, it is far too broad and not expressed in measurable terms. It should be broken up into multiple SLOs that focus on the specific knowledge, skills, and values that are necessary to teach history effectively at the secondary level.

**SLO:** Students will be able to connect present phenomena with the living past.

This SLO is vague due to undefined terms like “connect”, “phenomena” and the “living past”. As written, a student could technically satisfy this outcome by claiming that “wearing clothes today makes us a lot like people in ancient times, who also wore clothes”—but surely that’s not the type or depth of “connection” desired here.

Evaluating Methods and Measures

Per the criteria specified by the university’s SLO Assessment Rubric (Appendix I), each assessment method should be well-suited to the SLO it measures, and must include at least two direct measures capable of supporting valid conclusions about student achievement of that SLO.

Below is an example of a strong approach to assessment, with two direct measures that are well-conceived to produce useful data on student achievement of the identified outcome.

**Strong**

**SLO:** Students will critically analyze social and cultural phenomena using evidence from quality anthropological sources.

**Measure 1:** Using a rubric to assess an in-class writing assignment. (DIRECT)

As explained in the program’s accompanying assessment summary (not included here, for the sake of space), faculty members assess student in-class assignments using a rubric with five levels of competency to assess student ability in each of three distinct areas. The SLO is strong, the measures are well-suitied, and the rubric is clear.

**Measure 2:** Using a rubric to assess a written portfolio and reflective essay. (DIRECT)

As explained in the program’s accompanying assessment summary (not included here, for the sake of space), faculty assess student portfolios that include upper-level written work and a reflective essay from graduating majors. The portfolios are evaluated using a rubric with four
levels of competency to assess student ability in each of five distinct areas: selection of sources, analysis, usage, organization, and clarity.

For illustrative purposes, here is the rubric the program developed (and attached to their assessment report) to support Measure 1:

<table>
<thead>
<tr>
<th></th>
<th>Excellent (4)</th>
<th>Competent (3)</th>
<th>Minimally Competent (2)</th>
<th>Poor (1)</th>
<th>Not Competent (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Citation of Sources</strong></td>
<td>Sources are cited completely. Works cited is correctly formatted.</td>
<td>Sources are mostly cited correctly. Works cited is mostly correctly formatted.</td>
<td>There are some errors in citation or citations missing. Works cited has some formatting errors or missing entries.</td>
<td>There are numerous errors in citation or citations missing. Works cited has numerous formatting errors or missing entries.</td>
<td>Missing citation of most/all sources and no works cited page (plagiarism)</td>
</tr>
<tr>
<td><strong>Quality of Sources</strong></td>
<td>Uses most relevant anthropological sources (including but not limited to known scholars/journals in that field) that support thesis/argument.</td>
<td>Uses some relevant anthropological sources that support thesis/argument.</td>
<td>The author does not provide sufficient anthropological sources that support thesis/argument.</td>
<td>Too few anthropological sources that support thesis/argument.</td>
<td>No anthropological sources used.</td>
</tr>
<tr>
<td><strong>Critically Analyze Social and Cultural Phenomena</strong></td>
<td>Author insightfully places the argument and evidence in anthropological context provided by sources. Demonstrates depth of understanding of the context. The argument is part of a larger scholarly discussion.</td>
<td>Author contextualizes argument using sources. At various moments, relates the argument to other scholarly discussions.</td>
<td>Author partially contextualizes argument with sources with only sporadic effort to link larger scholarly discussions. Irrelevant or misinformed use of sources.</td>
<td>Author minimally uses sources to contextualize argument and no connection to scholarly discussions. A number of factual errors presented.</td>
<td>Author demonstrates no awareness to connect sources to author’s argument.</td>
</tr>
</tbody>
</table>

Rubrics are not the only way to gather high quality data, but a good rubric with clearly defined evaluative criteria and levels of achievement is extremely useful for documenting the extent to which students are achieving specific outcomes. Rubrics hone in on specific skills and also help calibrate varying perceptions about what constitutes acceptable performance across multiple faculty and years; thus, they capture data with a degree of specificity and consistency that simple grades cannot match. Consequently, they make it substantially easier to identify areas of concern and formulate appropriate actions for improvement.
Unacceptable

**SLO:** Students will be able to critically assess anthropological theories and methods.

**Measure 1:** Headcount of students who earn a C or higher in Research Methods.

This method is unacceptable for two obvious reasons: (1) it does not include at least two direct measures that can support valid conclusions about the SLO, and (2) the only measure identified here is not acceptable, as course grades are not an appropriate or reliable indicator of student learning as it pertains to the particular outcome being assessed. See *Course Grades Have No Place in Program Assessment* for more on this.

Evaluating the Assessment Report

Per the criteria specified by the university’s SLO Assessment Rubric (Appendix I), the program’s report and analysis of assessment findings—often referred to as the “assessment report,” which is formally submitted via Campus Labs—must do all of the following:

- provide a clear, focused summary of the assessment results
- include appropriate documentation (e.g. a copy of the assessment instrument/rubric) to allow for a detailed review of the assessment methodology and/or findings
- provide a clear and reasonable analysis of the findings, including the degree to which each learning outcome was met

Sample Assessment Summary

**SLO:** Students will be able to differentiate the subject matters of the four fields of Anthropology.

**Assessment Method:** We will assess students’ foundational knowledge through embedded questions in ANTH 1102.

**Measure Results Narrative:** We asked the following questions about the differences between the four subfields of anthropology of all students enrolled in ANTH 1102 during the Fall 2017 semester. ANTH 1102 is our Introduction to Anthropology course and is required for all Anthropology majors. The results include those for both majors and non-majors. However, numerous students choose the Anthropology major after they complete this course, hence our decision to assess everyone. We were not able to assess all sections.

Question 1 related to Archaeology, Q2 to Physical Anthropology, Q3 to Linguistic Anthropology, and Q4 to Cultural Anthropology. The table shows the total number of students assessed in each section and the percentage who answered each question correctly.
SLO direct measurement #1:

<table>
<thead>
<tr>
<th>Section</th>
<th># of Students Assessed</th>
<th>Fall 2017 Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1</td>
<td>24</td>
<td>95.7%</td>
<td>91.7%</td>
<td>100.0%</td>
<td>95.8%</td>
</tr>
<tr>
<td>Section 2</td>
<td>22</td>
<td>90.9%</td>
<td>31.8%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Section 3</td>
<td>25</td>
<td>72.0%</td>
<td>72.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td>84.5%</td>
<td>66.2%</td>
<td>100.0%</td>
<td>98.6%</td>
</tr>
</tbody>
</table>

This assessment report is strong because it provides a clear summary with appropriate supporting data/documentation (the table) to facilitate a detailed review of the methodology and findings. Combined with a strong analytical reflection on strengths, weaknesses, and actions for improvement (not included here, for the sake of space), this kind of reporting shows clearly that the program is meaningfully engaged in assessment.

Sample Findings

**SLO**: Students will be able to identify the elements of basic models of communication.

**SLO Achievement Strengths**: Students were able to see that different models of communication had different orientations (mass, group, interpersonal) and different methodologies (qualitative and quantitative), as well as basic assumptions about human beings.

**SLO Achievement Weaknesses**: Students were not asked to apply these models to their own lives and their own perception of the mediated culture that surrounds them.

**Use of Results for SLO**: In the final project, students should tell why they chose a particular communication model and how it helps to understand their own prejudices and weaknesses in analyzing and evaluating something to which they are predisposed.

Despite a strong summary of the assessment method (not included here, for the sake of space), this assessment report is unacceptable because it lacks supporting data and relevant conclusions based on those findings. No data is provided to explain the strengths and weaknesses reported here, and there is also no indication of the degree to which the outcome was met. For the reported weaknesses, the program notes that students were not asked to apply models to their own lives, and concludes, in the Use of Results section, that they should be asked to do so in the future. This is speculation about future possibilities for the assignment; it is not a valid, data-informed conclusion about the degree to which students achieved the outcome ostensibly being assessed. (In fact, students’ ability to apply such models to their own lives does not seem relevant to the outcome as it is stated here.) Consequently, stakeholders could raise legitimate concerns as to whether the program is actually measuring what it thinks/claims it is measuring, and whether those measures are adequate or sufficiently meaningful to support valid conclusions about student learning and actions for improvement.
Sample Use of Results

**Use of Results for SLO:** The Capstone Seminar is a relatively new course, having been delivered only twice. It is identified on the program’s curriculum map as the point of mastery for this and other outcomes. This year is the first assessment of outcome achievement in that course, and the results suggest a need for further reinforcement of research methods in literary and rhetorical studies. The weaknesses in the Capstone Seminar assessment appear to be due in part to students’ attempts to perform interdisciplinary research, which is a valuable skill and encouraged in the program. Prior to attempting that interdisciplinary research, however, students in the seminar must demonstrate a firm understanding of their primary discipline’s methods and theoretical frameworks. In the coming academic year, the instructor in the Capstone Seminar will develop scaffolded assignments and assessment to reinforce and assess research methods and use of theory in literary or rhetorical studies; at the end of the course, the instructor and the curriculum committee will work to identify any strengths or weaknesses that can be improved with further revisions of the course.

Following a strong summary of the assessment method and acceptable reflection on the strengths and weaknesses detected in students’ abilities (not included here, for the sake of space), this Use of Results narrative nicely acknowledges legitimate limitations in the conclusions that can be drawn for this SLO at this point in time. This is a new course, a new outcome, and the first time the outcome has been assessed, so there is no comparative/trend data to draw upon for analysis. Despite those limitations, the narrative makes a clear effort to extrapolate what inferences it can based on the results, identifies a reasonable concern suggested by the data (i.e., students attempting interdisciplinary research prematurely, before they have adequately mastered research methods in the primary discipline), and proposes a reasonable action to address this (i.e., restructuring assignments to ensure more, or progressively more challenging, practice with research/theory in the primary discipline).

Here are some excerpts from other “Use of Results” statements that are refreshingly clear, specific:

- “The professor teaching the capstone course will emphasize the ability to write a strong critique statement in the upcoming year by incorporating additional practice exercises.”
- “Specific actions will be to focus on sketchbooks and sequential projects to demonstrate process as a method for concept and design development. Also, the senior capstone course will include more specific guidelines for students concentrating in graphic design.”
- “We plan to emphasize philosophy of punishment more and add a new assignment on prison design.”
- “The faculty curriculum committee has met and, based on these findings, has agreed to incorporate additional in-class lecture and discussion time to this concept in all sections of this course.”
- “Faculty will begin to incorporate exercises and assignments which explicitly guide our majors in the steps required to complete a successful document analysis.”

Assuming these actions are clearly and reasonably related to the areas of weakness the program identified, they are a perfectly acceptable way to close the loop and demonstrate that the program is engaged in making intentional, ongoing improvements.
Common Problems with Assessment Reports

Listed below are some of the most common problems that cause assessment reports to be problematic or unacceptable:

- **Tentative/passive language without commitment to action for change**
  Program assessment should be robust enough to allow for confident conclusions about how student learning can be improved. Tentative language may suggest the program has reservations about the validity of its findings, or is not committed to follow through with action. Avoid tentative/passive language such as: “students *may need* more direction in developing their elevator pitch and make it more relevant to their career needs”; or “more emphasis *needs to be placed* on helping students learn how to edit their own work”; or “in future sections of this course, the instructor needs to demonstrate the importance of research and theoretical models in everyday life.” Focus on what students *need*, and what the program *will* do to address it.

- **Insufficient information**
  The use of results should include sufficient explanation/detail for a reader to understand how or why the action is likely to improve learning in some identified area of weakness. It is not acceptable to simply state a change (e.g. “Revise the exit interview.”).

- **Incorrect information**
  Information or supporting data provided in the assessment report needs to be clear, relevant, and meaningful to the strengths, weaknesses, and/or actions for improvement identified. Data tossed in for its own sake is not the same as useful data. For example, stating “82% of the student assignments are satisfactory” does not really *mean* anything. This information will not likely help to understand or improve student learning because it isn’t sufficiently detailed to inform that kind of analysis. It is an arbitrary statistic.

- **Continued action in lieu of new action**
  The actions identified in the use of results should constitute a new effort to improve student learning. Stating that the program will simply continue doing something it is already doing is not actually taking action (e.g., “Faculty will continue to communicate to majors the importance of taking the methods course as early as possible.”). It is fine to mention what the program will continue doing, but it is not sufficient to close the loop. Closing the loop on the most recent assessment results requires some action rooted in those results. (If everything is going so well with the identified SLO that the findings do not indicate a need for change, then an appropriate action could be to rotate in a different SLO to focus on improvements in other areas for the coming year.)
Glossary

**Assessment** is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development. (Palomba & Banta, 1999)

**Course-level Assessment** or “Course Assessment” refers to methods of assessing student learning within the classroom environment, using course goals, outcomes, and content to gauge the extent of learning that occurs during the course term.

**Curriculum Mapping** is an analytical approach that allows faculty to identify important components of program curricula, place them in relation to each other in a visual format, and then capture an overarching curricular structure to support cognitive scaffolding for further analysis. A curriculum map is a visual tool that can be used to introduce new students and faculty to the program, curriculum discussion, accreditation requirements, and provides an approach to systematically study the curriculum. Curriculum mapping is especially helpful in implementing an assessment plan. (Cuevas, Matwev & Feit, 2009). See Identifying Learning Opportunities above for more information.

**Direct Assessment** focuses on materials or behaviors that are produced directly by the students being assessed for purposes of demonstrating what, or how well, they have learned. Scoring their performance on tests, term papers, oral presentations, or other formal assignments or exercises are examples of direct assessment. Direct assessment can occur within a single course (e.g., performance on a series of tests) or across multiple courses and years (comparing writing scores from sophomore to senior year).

**Embedded Assessment** is a means of gathering information about student learning that is integrated into existing teaching and learning processes, in lieu of implementing separate, additional assessments solely for purposes of program assessment. The benefit is greater efficiency or ease of data collection, such that students need not be asked to demonstrate similar skills multiple times purely for the sake of program reporting need. Results from well-planned course-embedded assessments can simultaneously serve the needs of an instructor (for assessing student performance in the course) and those of the program director or chair (for assessing student performance or progression throughout the broader program in which that course occurs). For example, a research paper in specific course might require students to demonstrate their ability to formulate a strong thesis, illustrate their supporting claims with clear evidence, and situate those claims in response to credible scholars who have weighed in on the same topic. Those might be primary outcomes for assessing student performance at the course-level, but the results could be compared with those from a similarly-structured assignment at an earlier (or later) stage in the curriculum to yield program-level data, with no additional or separate “program assessment” work. Likewise, the same course assignment and rubric or scoring criteria could be tweaked so that, with little or no additional effort, it also captures meaningful data for other program-level outcomes, such as students’ ability to locate and evaluate the quality of web-based information and to select appropriate tools for conducting research.

**Formative Assessment** uses information or data about student learning collected during a course or program in order to guide improvements in teaching and learning. Formative assessment activities
are usually low-stakes or no-stakes; they do not contribute substantially to the final evaluation or grade of the student or may not even be assessed at the individual student level. For example, posing a question in class and asking for a show of hands in support of different response options would be formative assessment at the class level. Observing the number of students who respond incorrectly can be used to determine if more time or practice is needed to help improve the class’s understanding of that concept.

**Indirect Assessment** uses students’ own perceptions or reflections about their learning, or secondary evidence, to make inferences about student learning. For example, surveys of employers, students’ self-assessments, or comments from a focus group are indirect evidence of learning. While this kind of evidence is not alone sufficient to support effective program assessment, it can and often does play a critical role in filling in a more complete picture of the impact a program has upon its students.

**Program-Level Assessment** or “Program Assessment” refers to methods of measuring the quality and impact of a program’s curricula on the students who complete it. Program-level assessment depends heavily on course-level assessment data, but approaches that data with a broader concern for what (and how well) students are learning at various stages of their progression through the curriculum; where there are opportunities to improve the scope, sequencing, and progressive rigor of coursework; and how successfully the program’s various parts are working in concert to equip program graduates with the desired knowledge, skills, behaviors, and perceptions they are expected to possess.

**Rubrics** are scoring tools that explicitly represent the performance expectations for an assignment or piece of work. A rubric divides the assigned work into component parts and provides clear descriptions of the characteristics of the work associated with each component, at varying levels of mastery. Rubrics can be used for a wide array of assignments: papers, oral presentations, artistic performances, group projects, etc. Rubrics can be used as scoring or grading guides, to provide formative feedback to support and guide ongoing learning efforts, or both.

**Student Learning Outcomes**—often abbreviated as “SLOs” or simply called “outcomes”—are operational statements that describe specific student work products or behaviors that evidence their acquisition of desired knowledge, skills, abilities, capacities, attitudes, or dispositions. Think of SLOs as the observable indicators that can best be used to determine whether students are achieving the educational goals of a program successfully.

**Summative Assessment** is the gathering of information at the conclusion of a course, program, or undergraduate career to improve learning or to meet accountability demands. When used for improvement, impacts the next cohort of students taking the course or program. Examples: examining student final exams in a course to see if certain specific areas of the curriculum were understood less well than others; analyzing senior projects for the ability to integrate across disciplines.
Appendix I: SLO Assessment Rubric

The rubric below was developed by the university’s SLO Advisory Committee to assist the colleges during their annual review of assessment practices for all programs.

See “College Review of Program SLO Assessment” for more information about this process.
# Student Learning Outcome (SLO) Assessment Rubric

<table>
<thead>
<tr>
<th>Program:</th>
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<tbody>
<tr>
<td>SLO no.:</td>
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<table>
<thead>
<tr>
<th>Criterion for Assessment</th>
<th>Qualities</th>
<th>Strong</th>
<th>Acceptable</th>
<th>Unacceptable</th>
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<tbody>
<tr>
<td>The SLO statement is clear, focused, and measurable.</td>
<td>Identifies specific knowledge, skills, or behaviors to be gained.</td>
<td>SLO specifies in very clear terms the knowledge, skills, or behaviors that students should be able to demonstrate.</td>
<td>SLO specifies the knowledge, skills, or behaviors that students should be able to demonstrate, but would benefit from more precise language.</td>
<td>The SLO is so vaguely or ambiguously stated as to invite confusion or uncertainty.</td>
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<td>The assessment methods and measures are appropriate and sufficient.</td>
<td>The assessment method(s) that is/are chosen are well suited to the SLO.</td>
<td>The assessment method(s) is/are well suited to measuring the degree to which students achieve the identified learning outcome.</td>
<td>The assessment method(s) seem(s) appropriate for the SLO.</td>
<td>It is questionable whether the assessment method(s) is/are well suited to measuring the degree to which students achieve the learning outcome.</td>
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<td>The report provides at least two direct measures capable of supporting valid conclusions about the achievement of the SLO.</td>
<td>The report provides at least two direct measures provide a rich data set supporting the capture of important/useful/valid insights about the degree to which students achieve the targeted learning outcome.</td>
<td>Assessment plan includes at least two direct measures adequate to measure SLO achievement but could be improved to capture a stronger data set.</td>
<td>Assessment plan fails to include two direct measures or does not provide a rich enough data set to draw valid conclusions.</td>
<td></td>
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<td>The assessment report is clear and complete in the report of results and the analysis of those findings.</td>
<td>The report provides a clear, focused summary of the assessment results.</td>
<td>The summary of assessment results is concise, reasonable, well organized, and clear.</td>
<td>The summary of results is adequate and understandable.</td>
<td>The summary of results is incomplete, disorganized, cluttered with excessive detail, or confusing.</td>
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<td>Where appropriate, documentation is provided to facilitate detailed review of assessment methodology and/or findings.</td>
<td>Where appropriate, supporting documentation/evidence is provided to facilitate detailed review of assessment methodology and/or findings.</td>
<td>The summary of assessment methodology and presentation of data is adequate, but additional documentation/evidence may be desirable.</td>
<td>The assessment report lacks sufficient clarity about assessment methodology, the collection of data, or presentation of the assessment findings.</td>
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<tr>
<td>The analysis of findings defines the degree to which the learning outcome was met.</td>
<td>The analysis and evidence establish the degree to which the learning outcome was met. Where appropriate, limitations to the interpretation of the data is acknowledged.</td>
<td>The evidence and analysis present information about the degree to which the learning outcome was achieved, but more detail or reflection about the interpretation of the findings may be desirable.</td>
<td>Conclusions about the degree to which the learning outcome was achieved are missing, unclear, or unsupported by the assessment findings.</td>
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<tr>
<td>The action plan in the “Use of Results” section is clear, detailed, and reasonable.</td>
<td>The planned actions are clear, detailed, and focused on improving student learning.</td>
<td>The action plan includes curricular or pedagogical change(s) – not merely a change in assessment – with specific completion dates, responsible parties, and anticipated documentation.</td>
<td>The action plan includes curricular or pedagogical change(s) – not merely a change in assessment – but may fail to specify completion dates, responsible parties, and/or anticipated documentation.</td>
<td>The action plan fails to include either a curricular or pedagogical change, is substantially unclear or confusing, or the planned action(s) seem superficial such that their effectiveness is called into question.</td>
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<td>The action plan “closes the loop” in response to assessment findings by identifying specific, concrete actions for improving student learning – or provides a clear justification as to why no action plan is needed.</td>
<td>The action plan is logically based on assessment findings. The planned actions are collectively robust, detailed, and sustainable. If no action plan is needed, the report provides a compelling justification based on assessment findings.</td>
<td>The action plan is logically based on assessment findings and commits to changes that may reasonably be expected to improve student achievement of the SLO. If no action plan is needed, the report offers a reasonable justification based on assessment findings.</td>
<td>The action plan is substantially unclear, fails to adequately address assessment findings, or offers excuses in lieu of thoughtful interpretation and concrete “next steps” to improve student achievement of the SLO.</td>
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