Guidelines for Reviewing Assessment Plans

All degree-granting programs at Saint Mary’s College are now expected to develop and implement plans for assessment of student learning outcomes. By assessment, we mean a systematic and ongoing process of identifying student learning outcomes, assessing student performance in relation to these outcomes, and using the results to improve student learning and academic programs. This process includes four basic steps:

1. Articulating outcomes for student learning;
2. Gathering evidence about how well students are achieving the outcomes;
3. Evaluating the evidence and interpreting the findings; and
4. Using the findings for curricular and programmatic improvement.

These four steps are typically thought of as a cycle with one step leading to the next, creating a process of continuous improvement:

Although assessment is required for institutional accreditation, it is also a powerful tool for improving academic programs and curricula. Therefore, assessment plans should describe how the assessment process will be conducted by and, most importantly, for the specified program; assessment should be locally defined, discipline specific, and faculty driven.

Assessment plans need not establish a large, elaborate, or extraneous process. In fact, programs are encouraged to plan small-scale projects (e.g., ones focusing on a single learning outcome drawing student work from a single course or short series of courses) that, if possible, reach findings through the collection of samples of student work already being assigned. No matter the scale, departments should develop an assessment process that is meaningful, manageable, and sustainable (Allen, 2004). That is, assessment plans should address issues that are meaningful to faculty involved in the program, should be built on assessment methods already in place and integrated into existing faculty work, and should be frequently discussed at regular faculty meetings.

As defined at SMC, assessment plans should address the following areas:

1. Student learning outcomes: What do faculty expect all students to know, be able to do, and value by the time they graduate?
2. Curricular alignment: Where does student learning take place in the major? Do students have adequate opportunities to achieve the learning outcomes?

3. Learning evidence: What types of evidence of student learning will be collected and analyzed?

4. Evidence review process: Which faculty will review the evidence and when, and how will they assess the student work?

The following sections describe our expectations around these four areas.

1. Student Learning Outcomes

At the program level, student learning outcomes describe the knowledge, skills, and values that students will acquire by the time they graduate. They answer the questions, what should students know? What should they be able to do? What should students value? These questions focus attention on the learner, not on what topics will be taught. They also describe the behavior students will use to demonstrate achievement of the outcomes (e.g., describe, analyze, explain). Learning outcomes generally fall into three categories:

- **Knowledge**: What do you want students to know and understand by the time they graduate? For example, what are the most important facts, concepts, and/or theories students should know and understand?
- **Skills**: What should students be able to do with what they know and understand? In particular, what thinking skills should students develop? Examples include application, analysis, problem-solving, decision-making, creativity, critical thinking skills.
- **Attitudes, behaviors, and values**: What do you want students to care about? What values and life-long learning habits should they develop? Typically included in this category are ethical behavior, civic engagement and social responsibility, and respect for diversity.

Below is an example of student learning outcomes organized by Bloom’s taxonomy of educational objectives.

### Examples of Student Learning Outcomes

<table>
<thead>
<tr>
<th>Category</th>
<th>Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Students can <em>list</em> the major theoretical approaches of the discipline.</td>
</tr>
<tr>
<td>Comprehension</td>
<td>Students can <em>describe</em> the key theories, concepts, and issues for each of the major theoretical approaches.</td>
</tr>
<tr>
<td>Application</td>
<td>Students can <em>apply</em> theoretical principles to solve real-world problems.</td>
</tr>
<tr>
<td>Analysis</td>
<td>Students can <em>analyze</em> the strengths and weaknesses of each of the major theoretical approaches for understanding specific phenomena.</td>
</tr>
<tr>
<td>Synthesis</td>
<td>Students can <em>integrate</em> theoretical approaches to explain complex phenomena.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Students can <em>select</em> the theoretical approach that is most applicable to a phenomenon and explain why they have selected that perspective.</td>
</tr>
</tbody>
</table>
In reviewing student learning outcomes, the following questions should be considered:

- Are they focused on the program as a whole and what students should know and be able to do having successfully completed the program?
- Are the outcomes student-centered? That is, do they describe what students will do rather than what the curriculum covers or topics that will be taught?
- Do they describe how students will demonstrate their achievement of the outcomes? To what degree are they measurable?
- Are they clear and understandable, to the point where they can be understood by the general public? Are they precise? Do they avoid vague terms such as “understand” or “appreciate”?
- Do they include higher-level learning outcomes beyond knowledge and understanding, such as critical thinking, synthesis, and evaluation?
- Are they discipline-specific? Do they reflect the distinctive aspects of the program rather than the general aims of liberal education?
- Are they reasonable in terms of number and scope? If the list of the most important outcomes extends beyond 6 statements, how does the program justify a lengthy list?

2. Curricular Alignment

Departments should show the relationship between a program’s required or “core” courses and their stated learning outcomes. Showing the alignment between the curriculum and the expected learning outcomes helps ensure that students are given the opportunity to learn, practice, and demonstrate competence regardless of what semester they take the course or who is teaching it (Hatfield, 2009). A curriculum map can help departments determine what type of evidence can be collected to most effectively assess student learning and where it can be found efficiently. A curriculum map can also indicate how student learning outcomes are introduced and reinforced throughout the curriculum and identify areas of overlap as well as potential gaps in students’ learning opportunities.

Following are two examples of maps showing how required courses address each learning outcome, the latter supplying greater specificity on the degree to which outcome were “introduced”, “practiced”, or “demonstrated”.

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Outcome 1</th>
<th>Outcome 2</th>
<th>Outcome 3</th>
<th>Outcome 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>101 X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103 X</td>
<td>X</td>
<td></td>
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<td>104</td>
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<td>110</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>125 X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Questions to consider when reviewing the curricular alignment between learning outcomes and required courses include:

- Does the curriculum map indicate that students have adequate opportunities to learn and demonstrate achievement of each learning outcome?
- Do students have multiple opportunities (that is, more than one course) to learn and demonstrate achievement of learning outcomes?
- Are learning outcomes addressed at several points in the curriculum, and not just clustered in introductory courses or senior-level courses?
- Does the curriculum map indicate increasing levels of proficiency?
- Are there any overlaps, gaps, or misalignments between the curriculum and the expected student learning outcomes?
- Is there a senior capstone course in which several outcomes might be assessed?

### 3. Evidence of Student Learning

Departments are expected to identify what evidence they will use to demonstrate that students have achieved the stated learning outcomes. Since assessment is an ongoing process, we recommend that departments start small and assess only one learning outcome per year. We also recommend sampling student work and, whenever possible, embedding assessment activities into coursework. The primary advantage of course-embedded assessment is that it relies on work produced by students as a normal part of their course work. This solves the potential problem of quality of student effort, is efficient and low cost, has face validity, and has the potential to provide maximally-useful assessment results (Suskie, 2009).

Evidence of student learning is generally divided into two types: direct and indirect. “Direct evidence” captures a direct observation or tangible demonstration of student performance. “Indirect evidence” captures someone’s opinions or perceptions of student learning, from the student or others. All departmental assessment plans must include at least one direct measure of student learning, which may or may not be supplemented by indirect measures. Relatedly, programs are encouraged to consider the use of multiple sources of evidence to provide a more complete picture of student learning.
Examples of Direct and Indirect Evidence of Student Learning

<table>
<thead>
<tr>
<th>Direct</th>
<th>Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course-embedded assessment</td>
<td>Student course evaluations</td>
</tr>
<tr>
<td>Student work samples from tests and exams developed within the program</td>
<td>Students’ written self-reflections, journal entries</td>
</tr>
<tr>
<td>Research papers and/or reports</td>
<td>Students’ self-assessment of their learning</td>
</tr>
<tr>
<td>Homework assignments</td>
<td>Alumni or employer surveys</td>
</tr>
<tr>
<td>Laboratory experiments</td>
<td>Student satisfaction surveys</td>
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<tr>
<td>Capstone projects or other culminating assignments</td>
<td>Focus groups</td>
</tr>
<tr>
<td>Collections of student work or portfolios</td>
<td>Exit surveys or interviews with graduating seniors</td>
</tr>
<tr>
<td>Performances in the fine arts or languages</td>
<td>Curriculum, syllabi, and transcript analyses</td>
</tr>
<tr>
<td>Oral presentations</td>
<td>Job placement</td>
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<tr>
<td>Performance on standardized exams</td>
<td>Retention and graduation rates</td>
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<tr>
<td></td>
<td>Graduate school acceptance statistics</td>
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<tr>
<td></td>
<td>Program rankings</td>
</tr>
</tbody>
</table>

Questions to consider about evidence of student learning include:

- Other than course grades, what evidence will be used to determine that students have achieved the stated learning outcomes?
- Does this evidence directly capture evidence of student learning? Is supplemental indirect evidence used?
- In which courses will evidence of student learning be collected? What assignments or prompts will be used?
- Have multiple sources of assessment evidence been considered?

4. Evidence Review Process

In addition to type of assessment evidence collected, programs should describe their assessment evidence review process, including which faculty will review the evidence, when, and how they will go about assessing the student work. Quantitative and qualitative methods (or a combination of the two) to analyze student work are equally valid, as is either collecting samples of student work or using work from all students in the program. No matter the method used to analyze the evidence, it should be reviewed by faculty who are core members of or affiliated with the program. This review process should be a collaborative one, involving departmental students and/or staff as long as primacy continues to be placed on the involvement of faculty.

Some assessment measures yield data that can be objectively scored; that is, responses are either correct or incorrect. In other cases, assessment measures can yield data that is qualitative and not amenable to dichotomous scoring (e.g., written essays, portfolios, performances). In these cases, faculty need to operationally define the relevant learning outcome and create a common frame of reference for evaluating student achievement. Doing so involves two steps: specifying key criteria that are the focus of the assessment and defining levels of performance (e.g., “below”, “meets”, and “exceeds” expectations). Typically, taking these two steps takes the form of a scoring rubric. Programs are strongly encouraged to develop such instruments for evaluating student work as a means of ensuring their conclusions are reasonably accurate and documenting how they arrived at their decisions.
Example of a Scoring Rubric

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Below Expectations</th>
<th>Meets Expectations</th>
<th>Exceeds Expectations</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental methodology</td>
<td>Experimental design demonstrates a misunderstanding of the methodology.</td>
<td>A basic understanding of the methodology is evident. However, critical elements of the methodology are missing, incorrectly developed or unfocused.</td>
<td>An understanding of the methodology is evident, and critical elements of the methodology are appropriately developed, but more subtle elements are ignored or unaccounted for.</td>
<td>All elements of the methodology are skillfully developed and understood (e.g., the objective of the chemical experiments are understood, properly carried out, and results are appropriately recorded and analyzed).</td>
</tr>
<tr>
<td>Conducting experiments</td>
<td>Limited ability to conduct experiments; the procedure does not allow control of all variables and stages of the procedure are missing or neglected.</td>
<td>Adequate ability to conduct experiments; the procedure could be more efficiently designed, but it allows for control of all variables and most stages of the procedure are accurate. Replication is modest.</td>
<td>Competent ability to conduct experiments; procedure is well designed and allows for control of all variables. All stages of the procedure are accurate. Replication is appropriate.</td>
<td>Mastery of the ability to conduct experiments; procedure is elegantly designed, fully employing laboratory equipment and modern instrumentation in all stages of the procedure. Full understanding of classical techniques to carry out experiments. Replication is robust.</td>
</tr>
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</table>

Descriptions of the assessment evidence review process should address the following questions:

- Who will be involved in the evidence review process? To what extent will all faculty involved in the program take part? Who in the department will lead the process?
- When will the assessment of student work occur? Are there plans for the review process to take place at a certain time during each year or as part of regular faculty activities?
- How will the student work be evaluated? Is there agreement on the criteria and the levels of performance used? Will particular evaluative tools, such as scoring rubrics, guides, or checklists, be used? If the evaluation is less structured, how will faculty ensure being reasonably accurate in arriving at their conclusions?
- Is there an appropriate balance between the elements necessary to achieve credibility and practical considerations, such as feasibility, time, effort, and cost?

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