ACCSC

2022 Monograph Series

ASSESSING STUDENT LEARNING OUTCOMES

WHY IS ASSESSING STUDENT LEARNING OUTCOMES IMPORTANT?

Academic leaders and administrators want to be able to say without hesitation and with confidence that their school is producing a skilled workforce that is meeting employer needs and that students are learning what they need to be successful in their lives and careers. But, this confidence requires institutions to commit to:

- Ensuring curriculum aligns with program and employment objectives;

- Developing an assessment process that is focused on improving student learning and institutional performance;

- Measuring learning in a meaningful way that meets specific programmatic, institutional, and student needs; and

- Using student learning outcomes to help with program planning, resource allocation, and curriculum revisions.

The assessment of student learning outcomes is significant and helps an institution to answer the question: "Do we do what we say we will do." This monograph seeks to show institutions how to develop a student learning assessment process that is focused on improving student learning outcomes and institutional performance through measurement and examination.

Graduation and employment rates are key indicators of success, and supplementing those measures with student learning outcomes strengthens an institution's overall assessment paradigm. Schools are encouraged to think about what students need to *learn* to be successful.

Through the assessment of student learning outcomes, the institution/program:

- Defines what students should be able to do upon completion of the course/program;

- Implements learning strategies to achieve those competencies;

- Assesses the achievement of the competencies; and

- Uses the results to improve programs and services and inform planning and resource allocation.

Student learning assessment is different from goals and objectives. Objectives indicate the intended results of instruction while student learning assessment indicates the evaluation and demonstration of achieved results – evidence that learning took place.

VALUE AND PURPOSE FOR ASSESSING STUDENT LEARNING

Assessment has been underway at the vast majority of institutions of higher education since the 1980s to differing degrees of success. Much has been learned since then regarding how to undertake meaningful and manageable assessment of student learning. While assessment of student learning is a requirement of the ACCSC *Standards of Accreditation*, systematically gathering and analyzing evidence of student learning serves to answer many pressing questions asked of schools and colleges: are students learning what they need in order to be

successful in life and careers? Are our schools and colleges worth the cost? How do we know students receive a high-quality education?

Assessment is integral to institutional planning, decision-making, curriculum design, and student success. Within schools and colleges, evidence of student learning helps to determine institutional effectiveness by requiring clearly stated learning outcomes about what we want our students to know and be able to do upon completion of various learning

experiences, along with a regular and ongoing process of reviewing student learning in relation to the stated outcomes. Building a coherent, integrated, and systematic process of assessing student learning in relation to desired knowledge, skills, and competencies allows us to state what credentials represent in terms of learning. This also allows us to examine whether students are learning what we need them to, uncover whether students can apply what they are learning in new contexts, and help to determine what we can do differently to assist students in developing the required knowledge, skills, and competencies *(Hutchings, 2011).*

Institutions represent vast diversity in terms of the specific students served, local contexts and organizational structures, tailored programs, employment community needs, history, and culture. ACCSC's Standards of Accreditation related to assessing student learning provide opportunity for schools and colleges to customize assessment processes to meet their specific mission and needs, and these processes are expected to be significant and ongoing.

A systematic and ongoing process of assessment occurs at multiple levels within an institution, including within individual courses and programs. A wide range of tools and methods may be used for gathering evidence about student learning, but the process is not one of data collection alone – it is about using the results to make improvements to the institution and students' learning.

This monograph provides a baseline understanding of the assessment process designed around improvement of student learning and institutional performance and outlines how to develop a sustainable and meaningful process of examining student learning that meets specific institutional and student needs.

While outcomes assessment focuses on measuring student achievement such as graduation rates, employment in the chosen career, and loan default rates, student learning outcomes assessment is the space in which schools and colleges focus on the ***learning.*** How do we know students have learned the desired knowledge, skills, and competencies? Are schools able to show it? Are students aware of what they have learned? Implementing such a system also positions an institution to address *Section VII – Student Learning, Assessment, Progress, and Achievement* of the standards which asks for demonstration of successful student achievement, through assessment practices, that students actually acquired the knowledge, skills, and competencies intended (including elements such as licensure/certificate exams).

Assessing student learning provides opportunity for the institution to demonstrate that students are learning what they need in order to be successful in life and careers through evidence of student learning. The student learning assessment process also helps in program planning, resource allocation, and curriculum revisions.

HOW TO APPROACH DEVELOPING ASSESSMENT PROCESSES

Before we explore the steps in the assessment process, it is useful to provide a framework for thinking about undertaking the work. Virtually everyone agrees that *what* students learn in college is central to subsequent success and satisfaction in life, to the nation's economic competitiveness and productivity, and to building healthy and civically engaged communities *(NILOA, 2016)*. For this and many other reasons, the stakes have never been higher in terms of ensuring college graduates acquire the needed knowledge, skills, and competencies. When done well, assessment of student learning is not just an effective means to improve student success, it is an essential element to ensure quality in alignment with ACCSC's values-based framework.

Assessment of student learning is defined as the *systematic collection, review, and use of information* about educational programs undertaken for the purpose of improving student learning and development. It involves many stakeholders within and outside of institutions including faculty, students, administrators, staff, employers, and alumni.

Meaningful assessment of student learning is built from five principles outlined by the National Institute for Learning Outcomes Assessment *(2016)*:

- Develop specific, actionable learning outcomes statements.

- Connect learning outcomes with actual student demonstrations of their learning.

- Collaborate with relevant stakeholders, beginning with the faculty.

- Design assessment approaches that generate actionable evidence about student learning that key stakeholders can understand and use to improve student and institutional performance.

- Focus on improvement and compliance will take care of itself.

Develop a framework for the Assessment Process:

- Identify who will be involved in the process;

- Write actionable learning outcomes;

- Obtain evidence of student learning;

- Evaluate results and initiate improvement plan as needed; and

- Communicate results to all stakeholders.

ELEMENTS THAT GUIDE THE DEVELOPMENT OF A MEANINGFUL ASSESSMENT PLAN

As a framework for thinking about developing an assessment plan, four elements provide useful lenses: that assessment processes are consensus-based, aligned, learner-centered, and clearly communicated *(Jankowski & Marshall, 2017)*.

Consensus-Based

Through faculty-led conversations, reflections, and explorations with employers, alumni, and others, a shared understanding and consensus is reached on learning outcomes. This shared understanding serves as the foundation for revising outcomes for enhanced clarity and designing educational experiences. Determining learning outcome statements is an inherently collaborative process.

Aligned

Using the agreed-upon learning outcomes, faculty and staff align educational experiences for intentional integration, coherence, and fostering of multiple pathways to student achievement. Alignment involves curriculum mapping, scaffolding of learning across educational experiences, assignment design, mapping of career pathways, and co-curricular engagement where applicable.

Learner-Centered

Educational experiences are designed and built around all learners and their specific learning journey. Taking a student view includes consideration of issues of equity, alternative delivery models, flexibility in offerings, integration of prior-learning assessment where applicable, and building multiple pathways. It reminds us that assessment is not something we do *to* students, but *with* them.

Clearly Communicated

Communication and collaboration with students and other audiences through transparent discussions around the outcomes sought within the educational system work to make the implicit explicit. Communication involves exploration and integration with advising, documentation of student learning, communication of outcomes and results to students, and meaningful engagement with employers.

These four elements guide the development and implementation of a meaningful assessment plan and process as well as position schools to address *Section VII (A)(2)(d), Substantive Standards, Standards of Accreditation:*

The school provides students with learning outcomes for each course and publishes in its catalog a written policy for assessing satisfactory student progress through the program. The school measures grades, projects, portfolios, externships, or other assessments against stated educational objectives that the school explains clearly to students. This policy must address performance standards and grading and be applied consistently.

Questions to consider in the development of an assessment plan and process built from the framework include:

- What processes are in place to facilitate discussions on developing learning outcome statements and shared understanding of the meaning of the learning outcomes? How are learning outcome statements reviewed and updated?

- Is there a shared understanding of the ends to which we are collectively striving? How are these communicated to students? To others internally and externally?

- How do the different pieces of the educational experience fit together to build toward shared learning outcomes?

- Are the connections between elements made clear to students?

DEVELOPING AN ASSESSMENT PROCESS

The assessment process outlined below is similar in development to steps in the *Self-Evaluation Processes and Practices* monograph in terms of being part of an ongoing, cyclical process of continuous improvement. When developing the assessment process, consider that there are different purposes for undertaking assessment, different levels at which it may occur (individual student, course, or program), and different uses to which the gathered evidence may be put. Depending on the reasons for assessing student learning, the level at which it is being assessed, and the use of the evidence, different stakeholders will have different roles and responsibilities in the process. In addition, the development of an assessment plan includes consideration of learner needs, exploration of how students learn, and implementation and support of pedagogies that advance student learning.

Student Learning Assessment occurs at various levels:

- Individual Student
- Class
- Program

Each level can inform the next level of assessment and contribute to institutional assessment and planning.

Begin assessment plan development by determining at which levels student learning will be examined – individual student, collectively within a course, or across an entire program. Ross Miller and Andrea Leskes (2005) claim that assessment can answer important questions about individual student learning, effectiveness of a single course or educational experience, collective impact of a program, or even the entire institution. Driven by questions of interest and in relation to the developed learning outcomes, assessment can examine learning that is specific to course content as well as transferrable skills and knowledge applied in the course.

Questions for examining individual student learning include:

- How well has the student achieved the learning outcomes set for the course?
- Is the student ready to advance?
- Are there future opportunities for the student to refine and develop the learning outcomes?

Questions regarding student learning within the entirety of a course or learning experience include:

- Do the assignments scaffold and build over time?
- Is the course at the appropriate level of learning for its placement within the curriculum?
- How consistently are students collectively meeting the learning outcomes?
- How well is the course fulfilling its purpose in the larger program and curriculum?

When looking at courses collectively or at a program as a whole, questions addressing student learning include:

- Has student work improved over time? Have students met the expectations for learning at the desired target level?

- Are the learning experiences organized in a coherent manner to allow for cumulative learning?

- Are students demonstrating learning at the desired level of mastery upon exit of the program?

- Are students applying their knowledge, skills, and competencies effectively within their chosen careers?

In addition to the level at which assessment occurs, the plan should examine if assessment is undertaken for formative or summative purposes.

Good assessment is undertaken to inform students of their learning and where they are in the path to their goals. It is done to improve practice and reflect on processes. However, it also provides a quality check to verify that students are leaving programs and educational experiences with the desired knowledge, skills, and competencies. Thus, an assessment plan includes a mix of formative and summative assessment measures.

Generally, program reporting on the assessment process includes providing documentation of the stated learning outcomes, indicating where and how they are made available to different constituencies, outlining how they are aligned and built into the curriculum, presenting the types of assessment measures used, providing information on who analyzes the results and how, discusses processes for interpreting the data, and indicates how results were used to make changes as well as any resulting improvements in student learning from the changes made. A program with an assessment process that addresses each of these elements will be well positioned to meet *Section II (A)(2)(a), Substantive Standards, Standards of Accreditation* which states that schools must have established processes for design and development of appropriate education and training programs through a process of student learning outcomes and competencies along with student assessment.

Formative assessment collects information on student learning in order to provide ongoing feedback to improve teaching and learning by identifying strengths and weaknesses and outlining areas of growth. Formative assessments are generally low stakes and provide students with additional opportunities to practice and demonstrate their knowledge, skills, and competencies.

Summative assessment examines student learning at the end of a course or program and compares demonstrated learning against a benchmark or specified target. Summative assessments are often high stakes, examining student mastery of the specified learning outcomes.

The assessment plan includes the following elements, represented in the cyclical figure below: *determination* of learning outcome statements, *selection* of appropriate measures of student learning, *mapping and alignment* of learning experiences to the outcomes, *gathering and analyzing* evidence of student learning, *communicating* the results, and *developing and implementing* an improvement plan.

Developing and implementing an improvement plan

Determination of learning outcome statements

Communicating the results

ASSESSMENT PLAN

Selection of appropriate measures of student learning

Gathering and analyzing evidence of student learning

Mapping & alignment of learning experiences
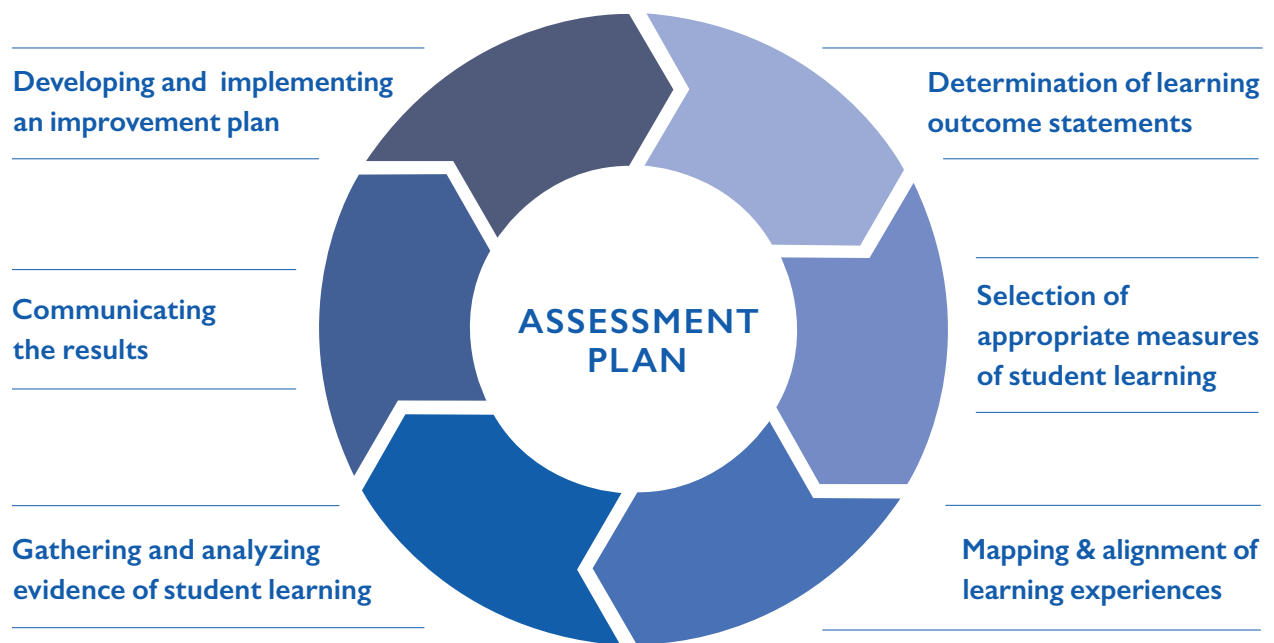
Ensuring that assessment is occurring at multiple levels including program-level addresses *Section II (A)(4), Substantive Standards, Standards of Accreditation* which indicates that evaluation of programs is systematic, evidence-based, includes benchmarking, is conducted by faculty and administrators, and is ongoing.

It is important to note, that most programs already collect a vast array of data on student learning in the form of assignments, demonstrations, projects, reflections, etc. These data sources provide the foundation from which to build an assessment process, meaning that much of planning an assessment process is uncovering the ongoing, embedded efforts already underway. The difference is that assessment asks for documentation of how the various pieces fit together to advance student learning and helps schools and colleges explain the intentional, systematic process employed to ensure that students are meeting desired learning outcomes. Thus, *assessment is not an add-on;* it is the examination of institutional processes focused on learning and the ways in which institutions can better support students in achieving desired ends.

DETERMINE LEARNING OUTCOME STATEMENTS

Learning outcome statements are derived from a clear mission statement and address the knowledge, skills, abilities, capacities, attitudes, dispositions, and competencies students are expected to acquire from a program.[1] Learning outcome statements should be action-driven, clearly stated, realistic, and achievable. The statements should be meaningful, measurable, and manageable. Learning outcome statements help design and define curriculum paths and specify a clear action that identifies the performance to be demonstrated, a statement that specifies what learning will be demonstrated, and a criterion or standard for acceptable performance. Learning outcome statements should be written in language that is clear to students and employers.

STEP 1: DEVELOP LEARNING OUTCOME STATEMENTS

Specify what learning will be demonstrated (What the student will be able to do); and criterion or standard for acceptable performance.

Being action-driven means learning outcomes statements outline the specific, observable behaviors that students who achieve the learning outcome will demonstrate. The statements answer the questions: How would you recognize it? What will the student be able to do? How will you know when they have achieved it? Focusing on action verbs in statement development helps draw attention to the product or performance rather than the process of learning. Verbs to avoid include "understand", "know", "value", and "appreciate". For a resource on 24 operational verbs for inclusion in learning outcome statements, see Cliff Adelman's *(2015)* paper on writing learning outcome statements.

For example, instead of the learning outcome "Understanding of complex circuitry", an action driven outcome would ask students to apply their understanding to solve a complex circuitry issue.

Examples of action-driven learning outcome statements include:

- Apply appropriate customer satisfaction strategies to address consumer complaints.

- Perform accounting tasks with appropriate accounting software programs.

- Design a web page using X software program.

- Adjust presentation styles to appropriately address the target audience.

- Predict and evaluate implications, consequences, and conclusions of specific actions within a given field.

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1 If there is not a clearly defined mission statement in place, the monograph on *Institutional Assessment and Improvement Planning* provides information on how to develop one.

These learning outcome statement examples are specific and measurable and should be derived from the end result of a unit, program, course, activity, or process. While program faculty can lead development of learning outcome statements, they should be reviewed, and where applicable, developed in partnership with staff, employers, alumni, subject-matter experts, practitioners, trade associations, teaching and learning community, and student input and feedback. The monograph *Maximizing Program Advisory Committees* provides guidance on developing a Program Advisory Committee ("PAC"). PACs are meaningful groups that can inform learning outcome development and review. Further, learning outcome statements are developed for technical and occupationally related courses, applied general education courses, and academic general education courses.

Please note, learning outcomes are different from goals and objectives. *Objectives* indicate the intended results of instruction while outcomes indicate the demonstration of achieved results – evidence that learning took place. Typically, course objectives focus more broadly on teaching intentions along with subject content, while learning outcomes describe what students should learn from the educational experience along with what they can do with what they have learned.

Once learning outcomes have been developed and vetted with relevant stakeholders and partners, it is useful to crosswalk program learning outcomes with other requirements. For instance, within *Section VII (A)(1 – 2), Substantive Standards, Standards of Accreditation*, the standards indicate that program learning outcomes should be consistent with program objectives but also "meet any relevant academic, occupational, or regulatory requirements" and be further aligned with the level of education intended, reflecting necessary knowledge, skills, and competencies as applicable. A crosswalk, such as the template below, can be useful to ensure that there are no gaps between the developed program learning outcomes and any other points of connection or regulatory requirements. Sharing the crosswalk with students and faculty members helps to ensure a collective understanding of the multiple ends to which the educational experience is striving.

PROGRAM-SPECIFIC LEARNING OUTCOMES	Learning Outcome 1	Learning Outcome 2	Learning Outcome 3
Articulation Opportunities	✓		
Employer/ Occupational Needs	✓		✓
Regulatory Requirements		✓	✓
Certification Requirements	✓		✓
Student Needs		✓	

Writing a Learning Outcome Statement for a Welding Program:

What makes a "good" welder? What skills must the welder be able to do? How will competencies be measured?

Upon completion of the welding program the student must demonstrate that he/she can fabricate (weld) various weldments using the forehand and backhand techniques.

SELECT APPROPRIATE MEASURES

Once learning outcome statements have been developed and vetted by a variety of stakeholders, approaches to assess student learning and document attainment of the outcomes are identified. Assessing student learning can involve a variety of approaches including portfolios, integrative projects, student self-reflection, employer judgment or feedback, and licensure/certification exams. In selecting measures to assess student learning or indicating what existing measures or approaches are employed, ensure that they are not overly expensive or time-consuming to implement, provide actionable information for guiding decision-making and curricular change, and provide information to students to help them advance in their learning.

STEP 2: DEVELOP APPROPRIATE ASSESSMENT MEASURES

For our Welding Program:

The graduate must successfully complete 10 consecutive welds using the backhand and forehand technic. The welds must meet the minimum standards as defined by the American Welding Society.

It is best practice to employ multiple measures across a program to better understand the fulsome picture of student learning *(Ewell, Paulson, & Kinzie, 2011; Kuh, Jankowski, Ikenberry, & Kinzie, 2014)*. A combination of direct and indirect methods at a program level can be useful to help inform improvement planning. Direct methods are processes of gathering data where students display their knowledge, skills, competencies, or behaviors – they are based on actual student work. Indirect methods are processes of gathering data that ask students to self-report or reflect on their knowledge, skills, competencies, or behaviors – they are based on perceived student learning.

Indirect Measures

- National student surveys
- Locally developed surveys
- Alumni, Employer surveys
- Exit interviews
- Focus groups
- Job placement rates
- Graduation rates
- Program enrollment and retention

Direct Measures

- Demonstrations/ Presentations
- Classroom-based performance assessments
- Capstones/Projects
- Tests/Exams
- Portfolios
- Licensure Exams
- Externally situated performance assessments
- Student work samples
- Observations of student behavior
- Supervisor/advisor evaluations

The tables on the left provide a variety of options for direct and indirect measures of learning. [2]

To identify approaches, examine the action verbs in the learning outcome statements as they indicate the manner in which students will need to demonstrate their learning. For example, if students are required to evaluate two different approaches to solve an issue as the learning outcome, choosing a multiple-choice test to demonstrate and assess their learning would not be a good fit because a multiple-choice test generally builds from the action verb "to identify" as opposed "to evaluate." Also, in the crosswalk of learning outcome statements with various other requirements, there may already be required assessments in place (such as licensure exams) that may be employed. Finally, consider assessment purposes: are the measures formative in nature to help advance student learning or summative to document attainment of learning outcomes at the end of a program? How will the results be used to inform program improvement?

Questions to consider when selecting measures to assess learning include:

- What questions do you have about student learning? What questions do you have about programs? What do you want to know?

- What can this population realistically tell you? What can this measure or approach tell you in relation to the learning outcomes?

- Will the results give you actionable data? Do you have the power to change anything based on the results?

- What are the expected levels of performance? Are there targets or benchmarks?

- What argument do you want to make about your students' learning? What type of evidence would be necessary to make the argument?

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2 For a useful online, searchable inventory of possible assessments see apps.airweb.org/surveys. In addition, there are a wide variety of sample assignment libraries with various examples assignmentlibrary.org.

Ideally, selecting approaches to assess student learning include embedded approaches (such as assignments within courses) that produce actionable data to inform student learning and program improvement. When reviewing approaches, consider issues of equity and consistency of application *(Montenegro & Jankowski, 2017)* – is it sustainable? Does it privilege certain ways of demonstrating knowledge and skills over another? If yes, is that required or are there a variety of ways to possibly demonstrate attainment of the knowledge and skills? For example, a medical laboratory technician has to be able to draw blood – you cannot demonstrate your ability to draw blood from a poster presentation; instead, you need to demonstrate your ability to draw blood by doing it. Depending, however, on the learning outcome, there are different ways to demonstrate attainment or mastery, whether by demonstration, debate, essay, portfolio, project, or employer feedback. Ensuring that students are aware of the requirements, why they need to demonstrate their learning in a particular fashion, and being mindful of issues of equity around assessment, will help to ensure a fair system of assessment.

Selection of measures and approaches, as well as documenting those decisions, helps to ensure that when students earn credits or complete a program, they have done it by meeting the learning outcomes at an acceptable level and that programs have developed an assessment approach in congruence with *Section VII (A)(3)(h), Substantive Standards, Standards of Accreditation*. Yet, any approach employed should meet the definitions of valid, reliable, fair, and flexible.

- *Valid:* process is sound and assesses that which is claimed.
- *Reliable:* evidence consistently interpreted.
- *Fair:* processes are equitable, reasonable, consistently applied, and clearly communicated to students.
- *Flexible*: reflects the individual student's needs; recognizes prior learning; allows for a range of methods.

MAPPING AND ALIGNING LEARNING

At this point in the process there are clearly defined learning outcome statements and appropriate measures or means to assess student learning linked to them. Benchmarks for attainment of the outcomes have been set, and the outcomes have been cross-walked to various other standards or points of alignment/connection.[3] Before gathering and analyzing the data on student learning though, it is useful to make certain that the entirety of the curriculum and educational experiences have been mapped in relation to the part they play to build towards the desired learning over the course of the program. To ensure that assessment approaches can be documented for each course or program offered and that the assessment is a part of the institutional assessment and improvement planning process, groups of faculty, staff, and students can work together to map the curriculum and ensure alignment.

Learning Activities/ Evaluative Criteria ← — →

Assignment/ Assessment ← — — — — →
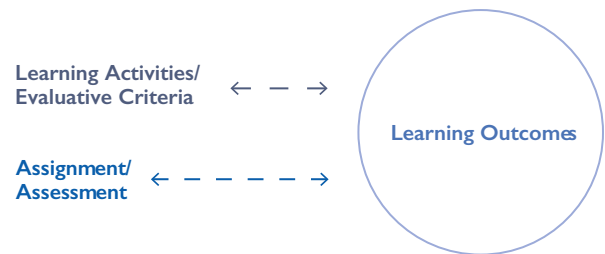
Learning Outcomes

While the choice of assessment approach or measure in the prior section requires an examination of the relationship between the learning outcome, assignment/assessment, and evaluative criteria or learning activities to support student achievement Such maps also provide useful reference points when reviewing evidence of student learning and determining what might be changed to improve outcomes. the relational view is between the assessment and a learning outcome.

	Course 1	Course 2	Course 3
Learning Outcome 1	Exam	Lab Paper	Capstone Project
Learning Outcome 2	Project Test	Exam	Licensure Test
Learning Outcome 3	Oral Presentation	Group Assignment	Capstone Project

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3 For a list of established benchmark points for graduation rates, employment rates, and licensure/certification exam pass rate see *Appendix VI of the Standards of Accreditation.*

Mapping the curriculum means finding the points of connection through various educational experiences where students are learning specific outcomes and demonstrating their ability to meet those outcomes. The process helps to develop a shared understanding of how each of the elements fit together in a coherent, integrated educational progression. It provides a more holistic view of the program and curriculum design and can be used to inform new faculty hires of the role of their course in the larger program curriculum as well as alert students to where they will gain necessary knowledge, skills, and competencies.

Curriculum mapping generally takes the form of a matrix where courses are listed across the top, and learning outcomes are listed down the side. Faculty and staff indicate with an "X" which courses address which learning outcomes. While this is an approach that will document the relationships, it is not the most useful. In a review of curriculum mapping approaches, along with the development of career pathways involving students and employers, several other possibilities emerge *(Jankowski & Marshall, 2017; Jankowski & Marshall, 2014)*. For instance, one additional layer to map in the relationship connections is the means by which learning is assessed.

This mapping helps to ensure that there are a variety of appropriate measures and provides a lens of the different tasks, demonstrations, and assignments we ask students to complete throughout the span of a course and program. Further, the maps provide valuable information when reviewing curriculum with PACs as well as for advising with students.

In addition to indicating how and where different learning outcomes are assessed, we can examine within the curriculum where the learning outcomes are being introduced (I), developed (D), and mastered (M), providing useful information to inform curriculum development and review. [4]

	Course 1	Course 2	Course 3
Program Outcome 1	I		D
Program Outcome 2	D	I	
Program Outcome 3	M	D	M

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4   For a list of questions to consider regarding aligning courses, see Norm Jones and Dan McInerney (2017): http://degreeprofile.org/wp-content/uploads/2016/08/Thinking-professors-guide-to-DQP.pdf

We can also broaden the lens to include student identified areas of learning (i.e., where a student indicates where they attained a student outcome and submit documentation of that learning) or indicate which learning outcomes may be satisfied in different ways, such as through prior-learning assessment or work-based learning. [5]

LEARNING OUTCOME 1

- *Prior learning* that is accepted in relation to specific outcomes

- *Courses* that address specific outcomes

- *Educational elements* that support specific outcomes

- *Employment* and other experiences that reinforce specific outcomes

- Possible *certifications* connected to the outcomes

- Elements *identified by learners* as supporting learning outcomes

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For our Welding program:

Think about where in the curriculum the student learns to do backhand and forehand welds. Also, where do they learn what the industry standards are for each welding process? When and how do you assess this learning?

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5 For information on prior-learning assessment, see the Center for Adult and Experiential learning (CAEL)

GATHERING AND ANALYZING EVIDENCE OF LEARNING

The maps indicate where the data will be collected on student learning attainment, but schools and colleges need to ensure that they have a viable means to gather and analyze the data to inform student learning and program improvement. Questions to consider in the collection process include:

- What is the means by which learning outcomes assessment information will be collected and displayed?

- Where will the data be stored or housed? Who has access? Are different views needed by stakeholder groups such that students can see their learning progression while faculty can view evidence of program effectiveness?

- What technology, if any, is needed?

- What staff support is needed to help gather and analyze the data? Who interprets and makes sense of the data?

- How will the information be analyzed to look across the various points of demonstration for a program-view of student learning?

Look at how the above results fit together to tell the story of student learning. Think about when- annually, semi-annually, end-of-term. It may depend on what is assessed, but remember- don't overburden your team!

Technology considerations in relation to assessment processes can be helpful for examining learning outcomes of education and training, yet are not required. If considering technology solutions for

STEP 3: GATHER DATA

Uncover the ongoing evaluation efforts already underway:

- Competencies performed

- Performance on external exams

- Embedded certifications/badges

- Externship evaluations

assessment data collection, consider what sort of information system or learning resource system is needed to support collection of data on student learning. Identify what data are already collected.

A simple reporting template may be employed as a means to document the ongoing assessment occurring within programs.

Developing a timeline of when reports are due on the assessment activities undertaken, the results, and any subsequent action resulting from review of the results will help ensure that the program has documentation of student learning and attainment. When analyzing data, it is useful to disaggregate by different student groups in comparison to acceptable or targeted levels of performance.

Such disaggregation can help inform program improvement and student success discussions. PACs can also review assessment data to inform discussions of curriculum.

Of note, it is important when reviewing a system to gather and analyze data on student learning that the focus is on program improvement and student learning improvement as opposed to developing a reporting system divorced from institutional effectiveness conversations. For instance, as shown in the figure to the right, many schools and colleges stop at the reporting phase and do not progress beyond reports and writing outcomes.

Instead, the process should inform student learning and program improvement, ending in a cycle of using the results to drive meaningful programmatic change. Such a learner-centered process and program improvement approach *alters the reporting cycle from reviewing evidence to*

developing improvement plans, making the assessment process an embedded part of ongoing institutional effectiveness and planning.

Submit Reports

Write Outcomes

Package Results

Identify Assessments
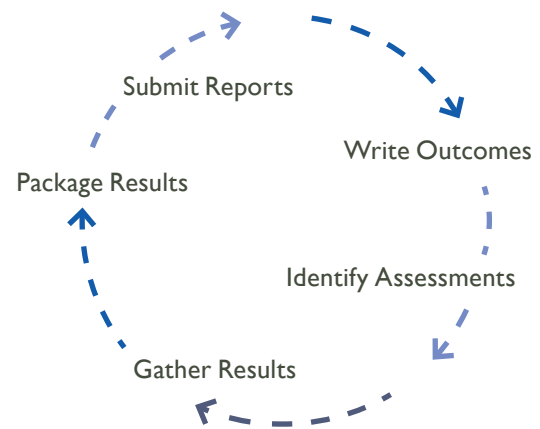
Gather Results

REPORTING OF RESULTS

Once data are analyzed, they should be reported out and disseminated to a variety of stakeholders. More often, results are reported internally rather than a combination of internally and externally *(Kuh, Jankowski, Ikenberry, & Kinzie, 2014)*. Reporting takes into consideration different displays for the data, different audiences and their reporting needs, as well as what counts as evidence for different audiences. To help with effectively reporting externally, the NILOA Transparency Framework provides a useful tool.

When reporting results, it is important to note the difference between simply making information available and meaningfully communicating results to various stakeholders *(Kuh, et. al, 2015)*. In the reporting process, there should also be space and time available for faculty and staff to discuss and make sense of the results. Questions to consider when developing reporting processes include:

- What information will be shared? In what format? With whom?

- How will results be presented? With visual displays? Grouped by learning outcome?

- Where will reports be made available? If publically available online, what contextual information needs to be provided alongside the reports?

- What spaces are available for stakeholders to discuss and reflect on the reports?

One area where institutions routinely struggle when reporting assessment processes and results is clearly communicating to those not familiar with a program or learning approach how the learning process helps students develop the skills and competencies needed and contributes to quality education. While most institutions have an assessment process in place, they are unsure how to talk about it in a coherent fashion.

The vast majority of schools and colleges provide a list of assessment activities undertaken, as opposed to providing a narrative around how the institution assesses student learning in relation to their unique mission, program opportunities, students served, and employer relations. The point is less to provide documentation that assessment occurred and students learned and more to outline the means by which a program is ensuring quality through an ongoing integrated and connected assessment process.

> **STEP 4: COMMUNICATE RESULTS**
>
> - Consider your audience.
>
> - Set aside time for faculty and staff to discuss results and consider improvements as needed.
>
> - Create a narrative on how you assess student learning.
>
> - Provide evidence of how you ensure quality in the educational process.

DEVELOPING AN IMPROVEMENT PLAN

The "final step" in the assessment process is determining what to do as a result of reviewing evidence of student learning and taking action to improve student learning. Within the assessment community, there is even a group that argues assessment has not taken place if the results are not put to use to improve student learning and institutional effectiveness. There are a variety of ways in which evidence of student learning can be used to outline a plan of improvement.

For individual students, feedback on assignments, courses, or learning experiences can be used to feed forward to future learning and additional opportunities to practice knowledge, skills, and competencies. Developing an individual learning improvement plan can help assist self-regulated learning, produce more productive and innovative employees, and engage students in the learning process to ensure student success *(Jankowski, 2017)*.

Evidence of student learning can also be used in the decision-making processes related to course development and programmatic improvements and change. Having improvement plans at the school, college, or program level ensures that institutions learn and improve, but does not necessarily mean that students improve in their learning. Focusing on use for program change creates an assessment process designed to improve a program on a rotating basis of review but may do nothing to assist the students currently in the program. Hence, it is useful to have improvement processes in place that provide meaningful and timely feedback to students in relation to the desired learning outcomes along with additional opportunities to learn and improve student performance alongside processes to review the program as a whole. Questions to consider in relation to improvement plan development include:

- How, exactly will the data be used to inform program planning and improvement? Improve student learning?

- Will the program faculty form a committee to review assessment findings and make recommendations for change or improvement?

- Will the entire department convene to discuss assessment results and program changes? Who will make formal recommendations for curricular or other changes?

- Why do you think making this change will lead to improvements in program effectiveness and student learning?

- What assumptions are we making about our students in terms of how they learn, the supports they need to learn, and where we think learning occurs?

- What are the possible root causes for less than desirable learning outcome performance and what might be done to address those root causes?

An improvement plan indicates the process by which evidence of student learning informed decision-making, along with what is being changed to improve that learning. It is important to continue to track changes made over time to ensure that the changes lead to actual improvements in student learning. Change on its own does not necessarily equal improvement in student learning or program effectiveness. Including when to review or examine if the changes led to increased learning also helps to unpack why the institution thinks making the suggested change will lead to enhanced student learning. For resources on using assessment results to improve student learning see *Charlie Blaich and Kathy Wise (2011)* on using results, along with a report by *Keston Fulcher and colleagues (2014)* on implementing an improvement-focused approach to assessing student learning.

STEP 5: IMPROVEMENT PLAN

An Improvement Plan should include:

- What data are collected.

- When assessment will occur.

- Who will review data and make recommendations for improvement.

- How improvement/changes will be integrated.

SUPPORTING SUSTAINABLE ASSESSMENT PROCESSES

Assessment is an ongoing process, and, as such, it is useful to explore elements that can help to organizationally and structurally support the sustainability of assessment efforts. To position assessment as a meaningful process of reflection and improvement as opposed to an add-on or reporting burden, assessment should be integrated with governance structures and existing processes such as program review, strategic planning, and institutional assessment and effectiveness efforts.

For example, as part of the self-evaluation process, targets for learning can be reviewed to examine how well programs are meeting stated expectations. Assessment technology needs can build from and support the learning resource system.[6] Professional development programs can reinforce active pedagogies that enable students to demonstrate skills and abilities as well as support faculty and staff implementation of the assessment process. In the *Faculty Improvement Planning and Implementation* monograph, it is reasoned that faculty have their

technical occupation alongside their teaching occupation – of which assessment is one element. Students need to apply their skills to real-world application, see connections across courses, and transfer their knowledge and skills to real-world experiences by practicing in their classes and labs the desired knowledge, skills, and competencies *(Jankowski, 2017)*. Such a cross-cutting element of the learning experience reinforces the need to involve multiple stakeholders in the assessment of student learning, including faculty and staff, but also students, alumni, and employers. It also speaks to the need to align professional development and other learning support systems with the assessment process.

Assessment is not possible without administrative support. Administrators may consider developing incentives to support engagement with assessment and endorse faculty ownership of assessment through offering and supporting spaces for dialogue and reflection on issues of student learning.

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6 See the monograph on *Learning Resource System* for targeted information on selection and use.

Keep it Sustainable!

- Get buy-in from faculty, staff, and other stakeholders by engaging them in the process.

- Provide administrative support and leadership.

- Communicate and use the results for improvement that supports student success.

Administrators also support regular and ongoing communication around assessment processes. Information on assessment should be shared widely to both internal and external audiences.

Implementing a system for ongoing education of stakeholders regarding the value and importance of assessment helps to build a shared understanding and collective vision. Administrative structures may also support assessment efforts. If there are multiple programs or learning outcomes that transcend specific programs, developing cross-cutting assessment committees can support review of plans and assessment reports as well as provide feedback and a wider view of overall student learning.

Assessment becomes one piece of educational design that helps to establish learning opportunities over time for students to apply and practice as well as integrate and demonstrate their knowledge, skills, and competencies. Thinking carefully about potential organizational barriers to assessment efforts and trouble shooting them in advance can help kick-off positive experiences with assessment efforts. Remember, when undertaking assessment, be flexible. Every institution and program may have a different approach, different ways the work is organized, and different purposes or focuses for assessment. Yet, we are all invested in supporting our student success, ensuring the quality of our education, and supporting our students in their learning. The process of assessing student learning positions programs and faculty, staff, and students within them to address these areas with intentionality and clarity.

REFERENCES AND RESOURCES

ACCSC Standards of Accreditation (July 2022). Arlington, VA: Accrediting Commission of Career Schools and Colleges. Available: https://www.accsc.org.

Adelman, C. (2015, February). *To Imagine a Verb: The Language and Syntax of Learning Outcomes Statements.* (Occasional Paper No. 24). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment.

Blaich, C. F., & Wise, K. S. (2011, January). *From gathering to using assessment results: Lessons from the Wabash National Study* (NILOA Occasional Paper No.8). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment.

Ewell, P. T., Paulson, K., & Kinzie, J. (2011). *Down and in: Assessment practices at the program level*. Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment.

Fulcher, K. H., Good, M. R., Coleman, C. M., & Smith, K. L. (2014, December). *A simple model for learning improvement: Weigh pig, feed pig, weigh pig*. (Occasional Paper No. 23). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment.

Hutchings, P. (2011). *What new faculty need to know about assessment.* (Assessment Brief). Urbana, IL: University of Illinois Urbana-Champaign and Indiana University, National Institute for Learning Outcomes Assessment.

Jankowski, N. A. (2017). *Unpacking relationships: Instruction and student outcomes*. Washington DC: American Council on Education.

Jankowski, N. A., & Marshall, D. W. (2017). *Degrees that matter: Moving higher education to a learning system paradigm.* Sterling, VA: Stylus Publishing.

Jankowski, N. A., & Marshall, D. W. (2014, October). *Roadmap to enhanced student learning: Implementing the DQP and Tuning*. Urbana, IL: National Institute for Learning Outcomes Assessment (NILOA) and Institute for Evidence-Based Change (IEBC).

Jones, N., & McInerney, D. (2017). *Faculty and the Degree Qualifications Profile: Questions of Learning.* Urbana, IL: National Institute for Learning Outcomes Assessment.

Kuh, G. D., Ikenberry, S. O., Jankowski, N. A., Cain, T. R., Ewell, P. T., Hutchings, P., & Kinzie, K. (2015). *Using evidence of student learning to improve higher education.* San Francisco, CA: Jossey-Bass.

Kuh, G. D., Jankowski, N., Ikenberry, S. O., & Kinzie, J. (2014). *Knowing What Students Know and Can Do: The Current State of Student Learning Outcomes Assessment in US Colleges and Universities.* Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA).

Miller, R., & Leskes, A. (2005). *Levels of assessment: From the student to the institution.* Washington, DC: Association of American Colleges and Universities.

Montenegro, E., & Jankowski, N. A. (2017, January). *Equity and assessment: Moving towards culturally responsive assessment. (Occasional Paper No. 29).* Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment (NILOA).

National Institute for Learning Outcomes Assessment. (2016, May). *Higher education quality: Why documenting learning matters.* Urbana, IL: University of Illinois and Indiana University, Author.

Resources: www.learningoutcomesassessment.org

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