SAN DIEGO STATE UNIVERSITY

PROGRAM ASSESSMENT PRIMER

(Version 1.0; 01 September 2014)

The most recent version of this primer is available at _assessment.sdsu.edu_.

Please send suggestions for improving this primer to _assessment@mail.sdsu.edu_

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I. INTRODUCTION

A. PRIMER ORIGIN AND GOAL – This primer was developed by members of the SDSU Student Learning Outcomes and Program Assessment Committee (SLOPAC) to provide a common reference guide for assessment efforts across our campus. The primer is designed to integrate some basic principles and processes of assessment with the basic architecture, operation, and terminology of WEAVE, the online relational database for reporting, managing, and tracking assessment efforts across the university.

B. CLARIFICATION OF ASSESSMENT TERMS, RELATIONSHIPS, AND EXPECTATIONS – A review of past WEAVE content and the production of this primer revealed five challenges to continued progress that merit mention in this introductory section. These challenges and their solutions are summarized below and are expanded upon in subsequent primer sections.

Challenge 1. *Dual usage of the term "Student Learning Outcomes (SLOs)"* – Historically, this term has been used across campus at both the "course" and "program" level. Unfortunately, such dual usage can obfuscate the actual level of a given SLO and, more importantly, worked in opposition to the establishing the concept that at least some SLOs at the course level should align with, and build capacity for, student achievement of one or more SLOs at the program, or more specifically, degree level.

> *Solution: The terms Course Learning Outcome (CLO) and Degree Learning Outcome (DLO) will be used in this primer and in WEAVE to clearly identify the level of a given student learning outcome. The use of degree, versus program, also serves to focus attention on establishing and assessing DLOs for each degree within a given program. Note that related degrees can readily share some common DLOs – just as degrees often share some common courses. That said, each degree should also have some unique DLOs that serve to differentiate it from other degrees. Please see Section III of the primer for further discussion.*

Challenge 2. *Inclusiveness of Assessment* – The term "program assessment" has historically referred to using assessment data to improve the student learning experience within a given program. While this broad goal remains, the ongoing national conversation and accreditation expectations are clearly focused on the integrity of the student-centered in-hand products of academic programs: the degrees themselves. Yet, some programs offering multiple undergraduate degrees have focused efforts, to date, on a subset of their undergraduate degrees.

> *Solution: WEAVE entities have been established for every undergraduate degree across the university and progress in evidence-based, action-oriented assessment should be made for each undergraduate degree. For undergraduate degrees that are "new to assessment," a natural first step is to develop a set of DLOs that establish the distinctness of the degree, while aligning it with their broader Program Mission and Program Learning Goals.*

Challenge 3. Varying interpretation of Program Mission and Program Goals entries within WEAVE – A review of these entries for programs across the campus revealed varying interpretations as to their exact meaning and intent.

> *Solution: Section IV of this primer clarifies the meaning and intent of these entries, whose titles have been modified slightly to read "Program Mission" and "Program Learning Goals." In short, a program's content in these entries should communicate the broad programmatic context that is common to all of their degrees. Operationally, this means that each degree within a program should generally have the same text for their Program Mission and Program Learning Goals. Please see Section III of the primer for further discussion.*

Challenge 4. A frequent focus on establishment of Measures versus action based on Findings – Many programs have developed a plethora of excellent Measures, but report relatively few related Findings and Action Plans followed by re-assessment of the Measure. This approach reduces the power of assessment for improving student learning and demonstrating degree integrity.

> *Solution: Sections II and IV of the primer are designed to facilitate a philosophical and operational focus developing Findings, formulating Action Plans, and reassessing the Measure – a process referred to in assessment parlance as "closing the loop." In addition, Section IV along with Appendix C and D of the primer discuss the need and process to include examples of authentic student work in Findings, which serve to illustrate the expected achievement for degree-seeking students as well as exemplary achievement to which all students should aspire.*

Challenge 5. A long interval between assessment efforts and their reporting in WEAVE: In previous years, program assessment had a single annual reporting deadline, typically in late Spring, for the previous academic year's assessment efforts. This timeline produced a *minimum* gap of *nearly a calendar year* between the collection of student work for a given Measure and the reporting of its related Findings and Action Plans.

> *Solution: Reporting of assessment efforts in WEAVE will now be semesterly with deadlines of December 1st and May 1st. While this new reporting schedule does not requiring any additional assessment work, it does:*
> *(1) promote the timely development and reporting of Findings and Action Plans for Measures conducted <u>during the previous semester</u>,*
> *(2) facilitate implementation of assessment efforts (e.g., new Measures, Action Plans, re-assessments following actions, etc.) planned <u>for the current semester</u>, and*
> *(3) encourage strategic development of assessment plans <u>for the upcoming semester(s)</u>.*

> *This new reporting schedule is discussed in Section IV, and a recommended semester checklist and general rubric for assessment efforts are provided in Appendices D and E.*

> *The following schedule is designed to help programs transition to this new semesterly reporting schedule over the 2014-2015 academic year.*

> - *All assessment information related to Measures conducted during Fall 2013 should be entered into WEAVE by the 01 December 2014 deadline*
> - *All assessment information related to Measures conducted during Spring 2014 and Fall 2014 should be entered into WEAVE by the 01 May 2015 deadline.*

C. INSTITUTIONAL RESOURCES FOR ASSESSMENT – In addition to consulting this primer, faculty are encouraged to capitalize on the following SDSU resources intended to facilitate assessment across the campus:

Center for Teaching and Learning (CTL) – The CTL works with colleges, programs, committees, and individuals to promote effective teaching and learning, including program assessment needs ranging from formulating basic strategies to implementing evidence-based curricular changes. CTL personnel are not meant to "do the work" for programs, but rather to work with them to build their capacity and sustainability for program assessment. Please visit the CTL website (ctl.sdsu.edu) or contact the CTL Director, Dr. Jennifer Imazeki, by email (ctl@mail.sdsu.edu) or phone (619.594.3157) for assistance.

Student Learning Outcomes and Program Assessment Committee (SLOPAC) – This senate-appointed university-level committee facilitates program assessment efforts and communication across the campus. Each college has a representative on the SLOPAC, and these representatives work closely with their colleges' deans, chairs/directors, and program assessment coordinators. Current SLOPAC membership and additional information is available at assessment.sdsu.edu.

WEAVE Online Access, Assistance, and Administration – WEAVE Online (hereafter shortened to simply WEAVE) is the SDSU-adopted software system for programs to manage, track, and report their assessment efforts for each of their degrees. Please contact the University WEAVE Coordinator, Dr. Nina Potter (npotter@mail.sdsu.edu; 619.594.3303), to establish and manage accounts, troubleshoot content issues, and assist with logistical and operational solutions.

Program Assessment and Institutional Accreditation website – This new website (assessment.sdsu.edu) has been established to provide a centralized location for assessment information and resources. The site contains the most recent version of this primer, and will continue to grow and evolve in response to institutional needs and accreditation requirements.

Library and Information Access – A clearinghouse website for general and discipline-specific journals and resources on the Scholarship of Teaching and Learning (SoTL) may be found at library.sdsu.edu/guides/sub.php?id=371. Engaging in the SoTL is an excellent means to align your educational effectiveness with your professional development.

II. FRAMING ASSESSMENT: MOTIVATIONS, BENEFITS, PRINCIPLES, AND MYTHS

A. MOTIVATIONS – There are many answers to the question, "Why assess?" A common *internal* motivation is the desire to improve student learning, while a common *external* motivation is the requirement to demonstrate degree integrity to regional and professional accrediting bodies. Fortunately, these internal and external motivations are increasingly aligned, and this primer is an attempt to facilitate success for both motivations.

In the most general terms, assessment may be defined as the act of determining the value of some component with respect to some broader endeavor through an evaluation of the component's nature and quality. In higher education, assessment historically often referred to the *summative grading* of individual students at the course level. In recent years, however, the term increasingly refers to the *formative evaluation* of student work as a means to increase student learning and success through strategic programmatic improvements in the structure, content, pedagogy, and sequence of courses for a given degree.

B. BENEFITS – The benefits of assessment to academic programs are most readily realized when their planning, implementation, and actions are embraced by faculty, informed by an understanding of basic principles, and focused on opportunities for improvement. Well-designed assessment plans enable programs to accomplish the following with respect to student learning and degree integrity:
- Identify and remediate basic skills and conceptual understanding.
- Identify skills and concepts to emphasize when developing new courses, re-designing existing courses, and updating assignments within courses.
- Articulate how courses and their sequence build student capacity for greater achievement[1]
- Establish program priorities and inform resource allocation decisions.
- Describe degree learning outcomes and demonstrate evidence of their achievement to students, parents, employers, donors, accrediting agencies, and other stakeholders
- Analyze and justify workloads for students and faculty.
- Inform policy decisions and resource allocations at higher institutional levels.
- Maximize the utility of academic program review and institutional accreditation.

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[1] A given course may be associated with multiple degrees within a program (e.g., BA and BS in Biology) as well as degrees across multiple departments (e.g., a course cross-listed in environmental sciences, geography, and geology). In these situations, powerful assessment-informed collaborations can take place that help clarify the relationships among the degrees, refine the role of the given course within each degree, and promote improved communications among the various stakeholders.

C. PRINCIPLES – The American Association for Higher Education developed the following nine principles[1] for effective program assessment.

1. *The assessment of student learning begins with educational values* – Assessment is not an end in itself but a vehicle for educational improvement. Its effective practice, then, begins with and enacts a vision of the kinds of learning we most value for students and strive to help them achieve. Educational values should drive not only what we choose to assess but also how we do so. Where questions about educational mission and values are skipped over, assessment threatens to be an exercise in measuring what is easy, rather than a process of improving what we really care about.

2. *Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time* – Learning is a complex process. It entails not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom. Assessment should reflect these understandings by employing a diverse array of methods, including those that call for actual performance, using them over time so as to reveal change, growth, and increasing degrees of integration. Such an approach aims for a more complete and accurate picture of learning, and therefore firmer bases for improving our students' educational experience.

3. *Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes* – Assessment is a goal-oriented process. It entails comparing educational performance with educational purposes and expectations – these derived from the institution's mission, from faculty intentions in program and course design, and from knowledge of students' own goals. Where program purposes lack specificity or agreement, assessment as a process pushes a campus toward clarity about where to aim and what standards to apply; assessment also prompts attention to where and how program goals will be taught and learned. Clear, shared, implementable goals are the cornerstone for assessment that is focused and useful.

4. *Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes* – Information about outcomes is of high importance; where students "end up" matters greatly. But to improve outcomes, we need to know about student experience along the way – about the curricula, teaching, and kind of student effort that lead to particular outcomes. Assessment can help us understand which students learn best under what conditions; with such knowledge comes the capacity to improve the whole of their learning.

5. *Assessment works best when it is ongoing, not episodic. Assessment is a process whose power is cumulative* – Though isolated, "one-shot" assessment can be better than none, improvement over time is best fostered when assessment entails a linked series of cohorts of students; it may mean collecting the same examples of student performance or using the same instrument semester after semester. The point is to monitor progress toward intended goals in a spirit of continuous improvement. Along the way, the assessment process itself should be evaluated and refined in light of emerging insights.

6. *Assessment fosters wider improvement when representatives from across the educational community are involved* – Student learning is a campus-wide responsibility, and assessment is a

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[1] Authors are A.W. Astin, T.W. Banta, K.P. Cross, E. El-Khawas, P.T. Ewell, P. Hutchings, T.J. Marchese, K.M. McClenney, M. Mentkowski, M.A. Miller, E.T. Moran, and B.D. Wright. Principles were developed with support from the Fund for the Improvement of Postsecondary Education with additional support for publication and dissemination from the Exxon Education Foundation (now ExxonMobil Foundation).

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

7. *Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about* – Assessment recognizes the value of information in the process of improvement. But to be useful, information must be connected to issues or questions that people really care about. This implies assessment approaches that produce evidence that relevant parties will find credible, suggestive, and applicable to decisions that need to be made. It means thinking in advance about how the information will be used, and by whom. The point of assessment is not to gather data and return "results;" it is a process that starts with the questions of decision-makers, that involves them in the gathering and interpreting of data, and that informs and helps guide continuous improvement.

8. *Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change* – Assessment alone changes little. Its greatest contribution comes on campuses where the quality of teaching and learning is visibly valued and worked at. On such campuses, the push to improve educational performance is a visible and primary goal of leadership; improving the quality of undergraduate education is central to the institution's planning, budgeting, and personnel decisions. On such campuses, information about learning outcomes is seen as an integral part of decision making, and avidly sought.

9. *Through assessment, educators meet responsibilities to students and to the public* – There is a compelling public stake in education. As educators, we have a responsibility to the public that support or depend on us to provide information about the ways in which our students meet goals and expectations. But that responsibility goes beyond the reporting of such information; our deeper obligation – to ourselves, our students, and society – is to improve. Those to whom educators are accountable have a corresponding obligation to support such attempts at improvement.

D. MYTHS – One of the ironies of higher education is that many faculty have had little formal training or professional development in assessment, yet our collective efforts are increasingly being viewed through an assessment-centered lens by various stakeholders (e.g., students, parents, employers, donors, and accrediting agencies). This irony has led to the origin and persistence of a number of myths about assessment among faculty. Some of the more frequently-heard myths are addressed below, and these responses are illuminated through the remainder of the primer.

Myth: Can't you just tell us what we need to do? – The foundation of assessment is the collective establishment of student expectations that frame and justify your program and its degrees. Only you and your colleagues can determine what your program and its degrees aims to accomplish, what your students should be able to do, and how your students should be able to demonstrate their capacities through the process of earning their degrees.

Myth: I do assessment. I give grades! – This claims fails to distinguish between the grading process, which measures overall performance in a course, and the assessment of achievement of specific Course Learning Outcomes[1] (CLOs). Consider the following scenario:

> In their recent course, confident Chris earned a C+ while Studious Stacy earned a D+. Based on the weights assigned to course components, the two students clearly earned the grades they received. *However, did Chris necessarily demonstrate more learning more than Stacy?* What if the evidence demonstrated that Chris simply paid much more attention to details in homework assignments? And what if Stacy showed superior performance on exams that directly measured achievement of the CLOs? In this scenario, one could argue that Stacy demonstrated a greater achievement of the CLOs than Chris, but simple inspection of the course grades could readily mask this reality.

Fortunately, various strategies exists wherein an instructor can develop and integrate scoring rubrics within assignments that simultaneously *clarify* instructor expectations, *provide* meaningful assessment findings, *inform* necessary grade determinations, and *improve* student learning.

Myth: Course Assessment is the same as Degree Assessment – The above example focused on assessment and grading at the course level. Degree assessment efforts transcend individual course assessment, although the two are clearly related as degrees remain largely defined by course requirements. In other words, Course Learning Outcomes[1] (CLOs) identify abilities that students are expected to achieve *within* a given course, while Degree Learning Outcomes[1] (DLOs) identify abilities students are expected to achieve *through* the capacity that is progressively build through the broader degree experience. Thus, a single course is not expected to build the capacity to achieve all DLOs – if this were possible, the integrity, value, and need for the broader degree would be highly questionable! However, the developing capacity to eventually achieve a given DLO can certainly be assessed through CLOs and their related student course work – this approach is explored in Section V of this primer.

Myth: WEAVE does Assessment – Since its adoption in 2011, WEAVE has served as the online system for tracking, managing, and communicating assessment efforts across all SDSU programs. Unfortunately, some have equated the process of assessment with the WEAVE online system itself, leading to a compliance-based entering of data in WEAVE that are of little direct use for improving student learning or demonstrating degree integrity. Entering information into WEAVE is not "doing assessment" – WEAVE simply provides a relational database for planning, collecting, managing, and reporting assessment activities. While this primer provides WEAVE "help-scripts" related to various assessment principles and processes, you are encouraged to access the WEAVE Help system and contact the WEAVE administrator for specific WEAVE-based questions and assistance.

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[1] See discussion in Section I. B.

Myth: How can you ask us to assess all assignments for all students in all courses every semester? This is ridiculous! – Yes, that *is* ridiculous, and *is not* what is being asked. Assessment at both the course and degree level involves a blend of intentional planning, effort, and action over time to progressively improve student learning and demonstrate degree integrity. Thus, program faculty are encouraged to collectively discuss where they are, establish where they need to go, and work together to move in that direction in a sustainable and mindful manner. In Mary Senter's (2001) view, "*The critical thing about assessment is the conversation among faculty it invokes. The data may be the spur to the conversation, but the conversation is the critical thing.*" This primer is intended to help build such capacity for assessment-focused faculty-driven conversations.

Myth: Academic freedom gives me the right to ignore assessment – Academic freedom is a central and cherished tenet of higher education, but not a shield from assessment or broader educational responsibility. The Association of American Colleges and Universities (AACU) directly address academic freedom and educational responsibility in their *Statement on Academic Freedom and Educational Responsibility* (2006):

> *"There is, however, an additional dimension of academic freedom that was not well developed in the original principles[1], and that has to do with the responsibilities of faculty members for educational programs. Faculty are responsible for establishing goals for student learning, for designing and implementing programs of general education and specialized study that intentionally cultivate the intended learning, and for assessing students' achievement. In these matters, faculty must work collaboratively with their colleagues in their departments, schools, and institutions as well as with relevant administrators. Academic freedom is necessary not just so faculty members can conduct their individual research and teach their own courses, but so they can enable students – through whole college programs of study – to acquire the learning they need to contribute to society."*

In closing, a "myth-to-reality table" is below for statements starting with "Assessment is . . .":

Often construed as:	When fully realized is:
… something to finish just before the final deadline.	… an ongoing process that is shared regularly with stakeholders.
… *that* person's job.	… a process involving *all* faculty through a productive and intentional focus on improving student learning and degree integrity.
… not important.	… vital for programs to improve and to be responsive to student, work-force, and broader societal needs.
… imposed by accrediting agencies.	… an evidence-based means to demonstrate degree value
… additional work.	… a core component of good pedagogy and reflective of a growth mindset.
… not a rational investment towards tenure and promotion.	… a powerful means to demonstrate a commitment to teaching effectiveness with a focus on *evidence* of student learning versus offering simple declarations of intent or assertions of success. In addition, the scholarship of teaching and learning (SoTL) is increasingly recognized as a disciplinary endeavor with external funding and peer-reviewed publications that may be as readily aligned with professional development as with teaching effectiveness.

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[1] "original principles" refers to the *Statement of Principles on Academic Freedom and Tenure* (1940), which can be accessed through the open-access digital "Redbook" at http://www.aaup.org/reports-publications/publications/redbook.

III. BUILDING THE FOUNDATION: PROGRAM MISSION, PROGRAM LEARNING GOALS, AND DEGREE LEARNING OUTCOMES

Effective and efficient degree assessment is founded on the three cornerstones of the Program Mission, the Program Learning Goals, and the Degree Learning Outcomes[1]. Note that "program" is defined here as a academic unit (i.e., department, center, program, school) whose faculty directly oversee and coordinate degrees that are united by discipline while varying in their specific nature and requirements.

A. PROGRAM MISSION – A well-crafted Program Mission statement is a powerful tool for establishing the educational values, priorities, and expectations that are shared in common across the program's various degrees. Importantly, this Program Mission statement should be primarily focused on your program's educational efforts, with only secondary reference to funding, alumni giving, etc. as they support, complement, and reinforce the primary educational focus.

In developing your Program Mission, some guiding questions for faculty discussion are:
- *Who does your program serve?*
- *What is its disciplinary context?*
- *What are the core and common capacities and capabilities of its graduates?*
- *What is the role of graduates with respect to industry, community, and societal needs?*
- *What are the values, principles, and practices that guide the program?*
- *How do program-embedded High Impact Practices (e.g. scholarly activity, international experiences, experiential learning, internships, community/service-learning) promote student achievement?*

Effective Program Mission statements should be consistent with the broader mission of SDSU, and should contextualize the Program Goals and Degree Learning Outcomes for each of its degrees (see Parts B and C below). As with all of program content, the Program Mission statement may be read by current and prospective students, parents, employers, journalists, and legislators, so strive for jargon-free language that is understandable to general readers and of a reasonable length, typically fewer than 250 words).

Below is a Program Mission statement, about 100 words long, for a Department of History offering a BA in History[2], a degree that will be used as a recurrent example throughout this primer.

> *The educational mission of the Department of History is to assist students to develop an appreciation of the breadth and depth of human experience through comparative studies of societies and cultures, past and present. Students develop their abilities to conduct research, assess and analyze evidence, and communicate clearly orally and in writing. We emphasize both research with primary resources and critical analysis of arguments about history and its relevance to contemporary issues, capabilities that enhance the participation of our students as informed, engaged, and thoughtful citizens. These competencies also prepare our students to pursue successful careers as teachers, lawyers, journalists, civil servants, politicians, and, historians.*

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[1] See discussion of Course Learning Outcomes and Degree Learning Outcomes in Section I. B.
[2] Portions freely adapted from a past Program Mission Statement for the Department of History at Georgetown University.

Process for entering the Program Mission in WEAVE[1]:
1. For **Cycle and Entity Selection**, select the appropriate AY and degree, respectively.
2. Click **Assessment** and select **Program Mission** from the menu.
3. On the resulting page, click **Add Program Mission** or **Edit** for an existing statement.
4. In the appropriate text boxes, enter/edit your mission and any additional information[2].
5. Select the cycle in which the Program Mission is being established and "Keep Active" for the **Active through Cycle**.
6. Select the appropriate Entry Status (i.e., **Draft/In Progress** or **Final**) and click **Save**.

B. PROGRAM LEARNING GOALS (PLGS) – PLGs are a relatively small set of statements that describe your program's *general intentions* with respect to student learning for your degree (or for multiple-degree-offering programs, common to all of these degrees). PLGs may span a continuum from clearly disciplinary (e.g., *Apply the scientific method*; *Deconstruct, analyze, and contextualize literary works*) to broadly metadisciplinary (e.g., *Communicate effectively in written and oral forms*; *Identify and solve problems*)[3]. Since such PLGs may be difficult to assess directly based on their broad and inclusive language, their main roles are to illuminate the Program Mission and to serve as a connection between the Program Mission and more directly assessable Degree Learning Outcomes of each degree. For many programs, three to seven well-crafted PLGs are often sufficient to establish the most essential and common goals shared among a given program's degrees.

In developing your PLGs, two guiding question for faculty discussion are: "What core skills, behaviors, capacities, and values should all students possess when walking across the stage to graduate with one of our program's degrees?" and "What should future employers expect our students within our program to be able to do?"

Returning to the hypothetical Department of History example, some appropriate PLGs for the program could be:

PLG 1: *Apply historical methods to compare societies and cultures, past and present*
PLG 2: *Describe major schools of historical thought (historiography)*
PLG 3: *Apply a general understanding of historical causation to the analysis and interpretation of historical trends*
PLG 4: *Employ a range of historical research methods*
PLG 5: *Interpret past human experience based on primary and secondary historical sources*
PLG 6: *Communicate effectively to a variety of audiences in written, visual, and oral modalities*
PLG 7: *Utilize a range of digital literacies in the above capacities and as preparation for life in the 21st century*

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[1] Please note the logistical recommendations outlined in Appendix A when entering information into WEAVE.
[2] To view how your Program Mission or any content will appear in a WEAVE report, click the associated "Preview Formatting" button.
[3] Some of your PLGs may be very similar to, or aligned with, the seven Essential Capacities and various Area Goals of the SDSU General Education program – this is not a bad thing! For example PLGs 6 and 7 are clearly aligned with two of the Essential Capacities.

Process for entering PLGs in WEAVE[1]
1. For **Cycle and Entity Selection**, select the appropriate AY and degree, respectively.
2. Click on **Assessment** and select **Program Learning Goals** from the dropdown menu.
3. On the resulting page, click **Add** for a new PLG or **Edit** within an expanded existing PLG.
4. Enter/edit a condensed description (title) and a complete description of your PLG.
5. Select the appropriate Entry Status (**Draft/In Progress** or **Final**).
6. Click **Save** when finished.

Recommendations when entering PLGs in WEAVE:
- Each entry should contain a single goal; clumping multiple goals within a single entry will prevent association with WEAVE between PLGs and Degree Learning Outcomes (DLOs)
- The condensed description and (full) description of each PLG should *start* with the *same* capitalized transitive "action" verb followed by a shorter and longer description, respectively, of the desired knowledge, behavior, capacity, etc. (e.g., Demonstrate X, Synthesize Y, Differentiate Z). This format provides an internally consistent structure among programs and avoids redundant beginnings such as "Students will be able to . . .".
- If a PLG is derived from an external accrediting agency, you may want to identify the source and any source-specific enumerations parenthetically at the end of the PLG.
- PLGs can be associated (i.e., linked) with multiple Degree Learning Outcomes, but this must be done from within each of the respective DLO's edit-pages via their "Associations" option.
- PLGs are automatically numbered, so avoid numbering them in your entry; PLGs can be re-ordered using the "Reorder" button and will be automatically renumbered.

C. DEGREE LEARNING OUTCOMES (DLOS) – Once broad PLGs have been established, attention can turn to developing the Degree Learning Outcomes (DLOs) to which most assessment work will be aligned. DLOs essentially "start at the end," establishing what students should be able to do as a result of completing their degree. Thus, DLOs establish the curricular obligations of the faculty as well as the expectations for what students should be committed to achieving. Both of these aspects can be assessed using direct evidence or strong inference from Measures, Targets, and Findings – a process outline in Section IV. In this way, DLOs describe the intended results of a learning experience in the same way that health outcomes describe the intended results of a medical treatment.

In developing your DLOs, two guiding questions for faculty discussion are: "How could we know that a student has achieved this DLO?" and "What tangible evidence could be acquired to evaluate and demonstrate student achievement of this DLO?

Below are some potential DLOs for a BA in History from our hypothetical Department of History; note their parenthetical association with one or more PLGs, which may be done within WEAVE:

DLO 1: Compare postwar developmental themes in two industrial societies using historical empathy (associated with PLGs 1, 4, 6)
DLO 2: Describe cause-and-effect as forces that influence continuity and change in societies through employment of primary and secondary sources (associated with PLGs 3, 5, 7)
DLO 3: Construct and articulate an effective written historical argument using multiple primary sources (associated with PLGs 6 and 7)

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[1] Please note the logistical recommendations outlined in Appendix A when entering information into WEAVE.

Note that each DLO is directly measurable by virtue of their overt, concrete, and explicit transitive verbs (e.g., compare, describe, construct, differentiate). Whenever possible, DLO language should avoid relatively covert, abstract, and vague transitive verbs (e.g., learn, understand, comprehend) as these verbs tend to represent multiple and complex capacities whose assessment often requires, appropriately, multiple and complex measurements. If you think a DLO may be too covert, abstract, or vague, then a good check is to ask how you might assess the DLO in a meaningful, actionable, and specific way *without* a plethora of qualifying statements. If answering this question proves difficult, consider deconstructing the DLO into a more overt and assessable form(s).

Finally, programs offering multiple degrees should understand that different degrees can contain the same DLO. However, if two degrees have an *identical set* of DLOs, then the question arises as to what differentiates the two degrees. For example, many of the DLOs for a BA and BS in Biology may be the same, but each should have some unique DLOs. In a parallel way, degrees that offer emphases should work to develop emphasis-specific DLOs that are indicated as such parenthetically. Pragmatically, programs can focus their initial assessment efforts on DLOs common to all of their degrees via aligned Measures (e.g., a capstone assignment in a course required for all degrees).

Process for entering DLOs in WEAVE[1]:
1. For **Cycle and Entity Selection**, select the appropriate AY and degree, respectively.
2. Click **Assessment** and select **Degree Learning Outcomes** from the dropdown menu.
3. On the resulting page, click **Add** for a new PLO or **Edit** within an expanded existing DLO.
4. In the appropriate text boxes, enter/change the condensed description (title) and a complete description.
5. Select **Yes** for the **Student Learning?** prompt.
6. Click **Add Association**s, select appropriate associations, and leave these sections open (do not press **Cancel**).
7. Select the appropriate Entry Status (**Draft/In Progress** or **Final**).
8. Select the **Established in** and **Active through** cycles.
9. Click **Save** when finished.

Recommendations when entering DLOs in WEAVE
- Each entry should contain a single outcome; entering multiple outcomes within a single entry will confound associations between a DLO and related PLGs.
- The condensed description and (full) description of each DLO should *start* with the *same* capitalized transitive "action" verb followed by a shorter and longer description, respectively, of the desired knowledge, behavior, capacity, etc. (e.g., Demonstrate X, Synthesize Y, Differentiate Z).
- If a DLO is derived from an external accrediting agency, programs can (1) parenthetically cite the source at the end of the DLO or (2) contact the University WEAVE Coordinator to have external accrediting content incorporated into WEAVE as a formal Association group. The latter will allow DLOs to be formally associated with these external standards, which can be a powerful step in moving to using WEAVE for both internal reporting and external accrediting by professional organizations, etc.
- DLOs are automatically numbered, so avoid numbering them in your entry; established DLOs can be re-ordered using the "Reorder" button and will be automatically renumbered.

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[1] Please note the logistical recommendations outlined in Appendix A when entering information into WEAVE.

IV. CRAFTING THE MATERIALS: MEASURES, TARGETS, FINDINGS, AND ACTION PLANS

Once the Program Mission, Program Learning Goals, and Degree Learning Outcomes described in Section III are established, most program efforts will focus on the strategic evidence-based action-focused assessment of DLOs as a means to improve student learning and demonstrate degree integrity. In this section, a general arc for assessing DLOs is presented using the specific language and framework of WEAVE (i.e., Measures, Targets, Findings, and Action Plans); this approach is intended to promote a common operating language within and among programs, and thereby increase efficiency with respect to conducting and reporting assessment efforts and actions.

A. MEASURE FOR ONE OR MORE DLOS – Measures can generally be divided into two types:

> *Direct measures* are based on *authentic student work* that establishes the level and plurality of student achievement with respect to one or more DLOs. Examples of authentic student work include exams, essays, performances, case studies, concept inventories, research papers, oral presentations, portfolios, theses, licensures, certification exams, etc.

> *Indirect measures* are based on *people's perceptions* of student achievement of a DLO. Examples of indirect measures include student evaluations, student perception surveys, employer surveys, employment placement rates.

While both types of measures are useful, direct measures provide stronger evidence regarding student achievement of a DLO and are therefore *required* for your program assessment. That said, indirect measures are *encouraged* as an informative opportunity for needs-assessment of your stakeholder students, employers, etc. Finally, appreciate that every Measure (and their related Target, Finding, and Action Plan) exists in service to understanding and improving student achievement in one or more DLOs – operationally, this relationship is established within WEAVE through the "Select Related Degree Learning Outcomes" on the Measure's edit-page.

Returning to our BA in History example, a potential Measure for their DLO 2 (i.e., *Describe cause-and-effect as forces that influence continuity and change in societies through the employment of primary and secondary sources*) could be:

> **Example Measure:** *Capstone Research Paper on Women's Rights Movement – In the capstone HIST480 course, students write a research paper using historical cause-and-effect to frame the Women's Rights movement of the 60's and 70's. Ten randomly-selected research papers are independently scored by two faculty (neither being the course instructor) using a rubric comprised of five categories and five scoring levels. Specific descriptors of student performance for a scoring level in a given category are provided in the attached HIST480_WomensRightsMovement_Rubric.pdf.*

A few comments on the above text: First, this Measure would be explicitly linked to DLO 2 of the BA in History degree within WEAVE. Second, the role of a scoring rubric in assessing the Measure is clearly established and the scoring rubric is attached using WEAVE's Document Management tool (see process in Appendix B). Third, while this scoring rubric is used for assessment, it could also readily be a component of course instructor's grading, and thereby also be used for the assignment grade and ultimately course grade.

For many degrees, the number of Measures that could be identified and developed to assess DLOs could be large and difficult to prioritize. The curricular mapping process discussed in Section V is

specifically designed to facilitate the strategic development of Measures for your program's degree(s).

When developing DLOs and their Measures, you are encouraged to consider the statement from Banta et al. (1996, p. 5) that: "*. . . assessment efforts should not be concerned about valuing what can be measured but, instead, about measuring that which is valued.*"

Process for entering Measures in WEAVE[1]:
1. For **Cycle and Entity Selection**, select the appropriate AY and degree, respectively.
2. Click **Assessment** and select **Measures/Targets/Findings** from the dropdown menu.
3. On the resulting page, click **Add Measure** or **Edit Measure** within an expanded existing Measure – note that a Measure cannot be added unless associated with at least one DLO.
4. Select the most appropriate **Source of Evidence** for the Measure.
5. Enter/revise a **Condensed Description** (**title**) and complete **Description** of the Measure.
6. Click **Edit Relationships** to associate the Measure with one or more DLOs.
7. Select the **Established in** and **Active through** cycles.
8. Select the appropriate Entry Status (**Draft/In Progress** or **Final**).
9. Click **Save** when finished
10. Upload and link any related documents using the process outlined in Appendix B.

Recommendations when entering Measures in WEAVE:
- A given Measure may be used to assess multiple DLOs! If you choose to do so, for each DLO assessed by the given Measure, you will need to provide a specific Target, Finding, and Action Plan.
- Programs do not need to assess every potential student for a given Measure. However, your sampling of student work should be randomly selected and of sufficient number to ensure confidence in the generalizability of any subsequent Findings and Action Plans.
- A note regarding GE assessment: A number of programs are involved in coordinated General Education assessment efforts across the campus, and discussions about how to best present these cross-cutting efforts to our regional accreditor and the broader public are underway. In the meantime, programs are welcome to include GE-course-based assessment efforts in their program's WEAVE content IF (1) the given GE course is also a required or elective course for a given degree and (2) the results of assessments are analyzed and reported separately for students who are majors in the given degree.

B. TARGET FOR A MEASURE – A Target represents the *a priori* expected level of student achievement that is established for a given Measure. In a perfect world, *all* students would demonstrate *complete* achievement of a given Measure and thereby its related DLO. While such "100% achievement" Targets may be merited for some Measures of some mission-critical DLOs, students will often inherently vary in their achievement. Thus, Targets are often most effectively expressed as a percent of students expected to score at or above some "meets expectations" level of achievement (as opposed to other less informative expressions such as average student performance, etc.). While such Targets are often expressed as percentages, you are encouraged to include absolute numbers to help contextualize the assessment results.

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[1] Please note the logistical recommendations outlined in Appendix A when entering information into WEAVE.

Returning to the BA in History example, a Target for the above Measure of PLO 2 could be:

> ***Example Target:*** *At least 75% of assessed students will receive scores of four or five in each of the five categories described in the rubric document.*

While a clear Target may be difficult to define initially for a new Measure, you are encouraged to make an informed initial effort as this will help refine the broader planning and implementation of the Measure. For example, given a Measure involving a rubric-scored reflective essay within a mid-curriculum major course, the initial defining of Targets for the various rubric categories will likely require consideration of the students' learning experiences to date and therefore their expected achievement in each category. A program might also explore what other programs, departments, colleges, institutions, and discipline-based professional associations have identified as Targets for comparable Measures.

Note that it is perfectly acceptable to revisit and revise Targets once a program has a cycle or more of Findings to help inform and refine their expectations. If students are consistently exceeding a Target, programs might consider raising the program expectations by raising the Target and acting upon the Findings. Conversely, if a reasonable Target is thoughtfully established, then it should not simply be lowered if not met! Instead, the program should consider what can be done to strengthen the degree's content and structure, and thereby improve student achievement of the related DLO(s) – this approach and mindset speaks to the core value of program assessment.

Process for entering Targets in WEAVE[1]:
1. For **Cycle and Entity Selection**, select the appropriate AY and degree, respectively.
2. Click **Assessment** and select **Measures/Targets/Findings** from the dropdown menu.
3. On the resulting page, click **Add Measure** or **Edit Measure** within an expanded existing Measure. Obviously, if a new Measure, complete the relevant Measure information first!
4. Under the **Targets and Findings** section of the Measure, click the **Add Target** button for the respective DLO being assessed by the given Measure.
5. Enter the Target information in the resulting page.
6. Select the **Established in** and **Active through** cycles.
7. Select the appropriate Entry Status (**Draft/In Progress** or **Final**).
8. Click **Save** when finished.
9. Upload and link any related documents using the process outlined in Appendix B.

Recommendations when entering Targets in WEAVE:
- The Target statement can be kept relatively short by referring to the broader evaluation framework established in the Measure's description.
- If the given Measure is associated with multiple DLOs, then you will be need to provide a specific Target with respect to each DLO. This approach may seem laborious, but it establishes clear connections between efforts and reporting.
- One must first define a Target in order to submit a subsequent Finding for the given Measure.
- Targets can be refined in light of Findings from previous assessment cycles, but such changes should be explained within the related Action Plan statement and implemented in the next assessment of the Measure, not retroactively!

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[1] Please note the logistical recommendations outlined in Appendix A when entering information into WEAVE.

C. FINDINGS FOR A MEASURE – Findings should ideally have two components: (1) A summary of the results, analyses, and interpretations of the authentic student work assessed by the Measure in light of the Target for the given DLO (wheew!) and (2) the inclusion of authentic student work, de-identified as appropriate, that represents the expected level of student achievement (e.g., "meets expectations") as well as exemplary levels of achievement (e.g., "outstanding"). For both components, you are encouraged to provide URL links or upload relevant documents using the Document Management option as described in Appendix B. Once these findings have been entered, be sure to mark your Target as Met, Partially Met, Not Met, or Not Reported This Cycle.

This inclusion of student work is intended to illuminate the integrity of your degrees for non-specialists (e.g., "Oh, *now* I understand, *this* is what they mean by "meets expectations" for this Measure of this DLO."). Note that any robust assessment scoring process should naturally identify such student work; thus, programs need only select a few representative student works from both achievement levels and incorporate these into their Findings section. Suggestions for acquiring and uploading such student work, while protecting student rights and privacy, is discussed in Section IV and Appendix C. Note that student waivers and releases are in development and will be posted at assessment.sdsu.edu. If programs would like to incorporate and include representative student works for each of their rubric categories, etc., they are welcomed and encouraged to do so.

Returning to the BA in History example, a Finding for the above Measure and Target of PLO 2 could be:

> **Example Finding:** *For the Fall 2013 offering of HIST480, 23 of the 24 students submitted the research paper. Detailed findings (e.g., scoring distributions for all papers, inter-rater reliability, validity, etc.) are provided in the attached HIST480_WomRightsMove_Findings.pdf file. Student performances met the established Target for four of the five rubric categories. The fifth rubric category focused on the proper use and documentation of primary and secondary sources was consistently lower (i.e., only 14 out of 23 students (60%) received a score of four or five and, compared to other rubric categories, a disproportionately greater number of students received scores of one and two). Thus, we view our Target as Partially Met. We have attached five de-identified research papers along with their associated scoring data based on the scoring rubric; Papers 1-3 are representative of our target expectations, while Papers 4 and 5 are considered exemplary student work to which all students should aspire.*

Process for entering Findings in WEAVE[1]:
1. For **Cycle and Entity Selection**, select the appropriate AY and degree, respectively.
2. Click **Assessment** and select **Measures/Targets/Findings** from the dropdown menu.
3. On the resulting page, click **Add Measure** or **Edit Measure** within an expanded existing Measure – note that a Measure must have a defined Target with respect to a DLO in order to enter a related Finding.
4. If a new Measure, complete the WEAVE process for Measures and Targets section.
5. Under the **Targets and Findings** section, click the **Add Finding** button for the respective DLO being assessed by the given Measure.
6. Enter the Finding information in the resulting page
7. Based on the Finding, select the most appropriate Target button (Met, Partially Met, etc.)
8. Select the appropriate Entry Status (**Draft/In Progress** or **Final**).
9. Click **Save** when finished.

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[1] Please note the logistical recommendations outlined in Appendix A when entering information into WEAVE.

10. Upload and link any related documents using the process outlined in Appendix B.

Recommendations when entering Findings in WEAVE:
- The Findings statement can be kept relatively short by referring to the broader evaluation framework established in the Measure's description.
- If the given Measure is associated with multiple DLOs, then you will be prompted to provide Findings for the Target established for each DLO.
- One must first define a Target in order to submit a Finding.
- Targets can be refined in light of Findings, and such Target changes should be explained within the related Action Plan.
- Findings can have documents (e.g., representative student work, graphs, score distributions, etc.) associated with them via the Document Management page – see Appendix B. When including such documents, then please be sure that the Findings text explains/contextualizes the respective roles and intents of the documents.

D. ACTION PLAN FOR A FINDING – Informed by the above arc of Measure-Targets-Findings, your program can develop Action Plans to improve student performance on a given Measure, and thereby promote student achievement of the related DLO(s) for your degree(s). The exact nature of an Action Plan will vary widely in form and content, and may well transcend the specific course in which the Measure was conducted (see example in Appendix D). Over time, your program will accumulate a variety of Action Plans operating on various timelines. WEAVE provides a means to collectively view, edit and make notes on all of these via the Action Plan Tracking page located under the Assessment tab; however, for sharing Action Plans out to your program as pdfs or printouts, the Action Plan Profile report may be of greater use (see Section VI).

Returning to the BA in History example, an Action Plan based on Findings for the Measure and Target of DLO 2 could be:

> ***Example Action Plan:*** *Given the central role of primary and secondary sources in historical research and understanding and the observed underperformance of our students in the related rubric category, the program has discussed and mapped where in the curriculum our students are currently introduced to, and build capacity for, achieving the Target for the related DLO. Based on this information, we will develop and implement changes to increase student success and program integrity during the next academic year, and then reassess this Measure to evaluate the effect of these changes.*

Given the critical role of developing and implementing evidence-based Action Plans and then re-assessing the impact of these actions for improving student learning, two additional examples of Action Plans drawn from SDSU programs are presented in Appendix D.

Process for entering Action Plans directly related to Measures in WEAVE[1]:
1. For **Cycle and Entity Selection**, select the appropriate AY and degree, respectively.
2. Click **Assessment** and select **Measure/Target/Finding/Action** from the dropdown menu.
3. On the resulting page, click **Add Measure** at the top of the section or **Edit Measure** within an expanded Measure; in both cases, note that you must enter Measure, Target, and Findings *before* you can add your Action Plan

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[1] Please note the logistical recommendations outlined in Appendix A when entering information into WEAVE.

4. For the given Measures, select **Add New Action Plan** or an existing **Related Action Plan** (blue underlined)
5. Enter or edit, respectively, the requested information on the resulting page.
6. Select the **Established in** and **Active through** cycles.
7. Select the appropriate Entry Status (**Draft/In Progress** or **Final**).
8. Click **Save** when finished
9. Upload and link any related documents using the process outlined in Appendix B.

In addition to Action Plans related to a specific measure, a program can also establish "free standing" Action Plans related to broader assessment efforts or initiatives (e.g., curricular mapping results, strategies to align/associate Course Learning Outcomes and Degree Learning Outcomes, restructuring a sequence of courses to reduce gaps and overlaps, etc.). Such "free-standing" Action Plans can be associated with Findings for multiple Measures through the "Manage Action Plan Relationships" button located in the Targets and Findings subsections of any Measure.

Process for entering Action Plans *not* directly related to established Measures in WEAVE[1]:
1. For **Cycle and Entity Selection**, select the appropriate AY and degree, respectively.
2. Click **Assessment** and select **Action Plan Tracking** from the dropdown menu.
3. On the resulting page, click **Add New** for a "free-standing" Action Plan.
4. Enter the relevant information on the resulting page.
5. Select the **Established in** and **Active through** cycles.
6. Select the appropriate Entry Status (**Draft/In Progress** or **Final**).
7. Click **Save** when finished.
8. Upload and link any related documents using the process outlined in Appendix B.

Recommendations when entering Action Plans in WEAVE:
- An Action Plan is just what is says: Who will do what, when, and why with respect to the related Findings in order to improve student success and degree integrity.
- Developing consensus-based Action Plans and consistently communicating with all involved parties will help realize the desired gains in student success and degree integrity – See Section VI.A. for how to generate an Action Plan Profile as a pdf file that can be shared across your program to engender discussion and promote progress.

E. SOME SUMMARY THOUGHTS AND QUOTE – The follow-through on Action Plans and subsequent re-assessment of the related Measure is arguably the most important step in the assessment process – so much so that this is often referred to as "closing the loop." Indeed, without such evidence-based re-assessment, the entire assessment process becomes an endeavor with little realized return on investment. This statement is echoed in the words of Palomba and Banta (1999):

"The important question is not how assessment is defined,
but whether assessment information is used."

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[1] Please note the logistical recommendations outlined in Appendix A when entering information into WEAVE.

V. EXPLORING THE TERRAIN: CURRICULAR MAPPING

Using the terminology of WEAVE, the previous two sections established some foundation components (Program Mission, Program Learning Goals, Degree Learning Outcomes) and an operational "arc of action" (Measures, Targets, Findings, Action Plans) for program assessement. This section overviews the process of curricular mapping, which is a powerful collaborative process that promotes faculty engagement through analysis, discussion, and action for fundamental questions like:

- Which of our courses address which of our Degree Learning Outcomes (DLOs)?
- How do our courses build capacity for student achievement of our DLOs?
- Which of my Course Learning Outcomes (CLOs) align with which of our DLOs?
- What opportunities exist within degree requirements for the assessment of our DLOs?

The spirit of the above questions are arguably captures by Yogi Berra's famous statement, "If you don't know where you're going, you might not get there." In this sense, curricular mapping can be viewed as a hybrid between indirect assessment and needs assessment, and its Findings can inform a broader curricular-mapping-based Action Plan that complements and contextualizes other Measure-specific Action Plans. This section discuss how to construct a template matrix for curricular mapping[1], and how to use this template matrix to address the above four questions through a few focused program meetings. Programs are encouraged to engage in curricular mapping at any time, and the process is being incorporated into future Academic Program Review protocols to encourage programs to reflect on where they are and where they want to go with respect to the content and structure of their various degrees.

A. CONSTRUCTING A TEMPLATE MATRIX – Prior to engaging in any curricular mapping, a template matrix should be developed where the first two columns list your degree's courses and their constituent CLOs and the first row lists your established DLOs. An example template matrix for our BA in History example is included here; note that its CLOs and DLOs are greatly abbreviated or omitted for conciseness. Some suggestions for constructing a template matrix include:

- *Construct the template matrix for accessibility, sortability, and flexibility* – While one could undertake this step using whiteboards, chalkboards, or butcher paper, the following digital approaches can help facilitate, record, and build upon program efforts:
  - *Microsoft Word or Excel:* Word is more flexible than Excel with respect to formatting within matrix cells, whereas Excel is more flexible than Word with respect to working with larger matrices, using conditional formatting, and managing multiple mapping versions and efforts as sheets within a single master file.
  - *Google Document or Spreadsheet*: While somewhat less flexible than either program above, these two cloud-based programs allow read or read/edit access for all authorized parties, which can help with initial matrix construction (i.e., crowd-sourcing of learning outcome input by relevant instructors) as well as mapping efforts. Of course, multi-party access also increases the potential for unintentional damage, so the lead person is encouraged to manage access and editing thoughtfully.

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[1] WEAVE contains a curricular mapping tool that programs are welcome to explore; however, at the time of this writing, the tool appears rather cumbersome and arguably less flexible than the approach presented in the sections below. Programs are welcome to explore and provide feedback to assessment@mail.sdsu.edu.

- *Establish an initial level of detail and inclusiveness* – Program often choose to initially focus on primary degree components (i.e., required core courses, internships, international experiences, etc.) and later incorporate secondary degree components (e.g., major electives, supporting courses from other departments, etc.). Regardless, programs are encouraged to establish and include explicit DLO for components that are not "housed" within formal courses (e.g., internships, international study, etc.), which will promote discussion of the role and integrity of these degree components.
- *List, contextualize, and enumerate courses to reflect the intended student path* – This approach facilitates faculty exploration of their major degree requirements from a student-centered perspective. The inclusion of course pre- and co-requisites will also help, while the alpha-numeric numbering within the CLO column (e.g., A.0. to K.4. in the example) allows the matrix to be easily sorted back to its original sequence after sorting-based explorations.
- *Seek faculty feedback and consensus* – Once the template matrix is constructed, consider sharing it with all faculty as a *draft* for refinement and collective endorsement *prior* any *actual* mapping activities; this approach will help avoid potential sidetracking discussions during the limited shared-time of program meetings whose focus is mapping *progress*.

Course	Course Learning Outcome (CLO)	DLO1. Compare…	DLO2. Describe…	DLO3. Construct…	DLO4. Differentiate…
A. HIST101 (GE Gateway)	A.0.				
	A.1. Describe…				
	A.2. Estimate…				
	A.3. Interpret…				
	A.4. Analyze…				
B. HIST204 (Major Gateway)	B.0.				
C. HIST230 (Prereq: A or B)	C.0.				
D. HIST320 (Prereq: C)	D.0.				
E. HIST330 (Prereq: C)	E.0.				
F. HIST390 (Prereq: C)	F.0.				
G. HIST420 (Prereq: D/E/F)	G.0.				
H. HIST450 (Prereq: D/E/F)	H.0.				
I. HIST440 (Prereq: D/E/F)	I.0.				
J. International Experience	J.0.				
K. HIST480 (Pre/coreq: G/H/I)	K.0.				
	K.1. Demonstrate…				
	K.2. Present…				
	K.3. Reflect…				
	K.4. Defend…				

After establishing a template matrix for your degree, your program's engagement in the four curricular mapping activities below will help address the four questions posed at the start of this section. Regardless of how your program uses curricular mapping, keeping a focus on learning outcomes at the course and degree levels will help keep the conversations constructive, collaborative, and evidence-based.

Programs offering multiple degrees should consider mapping their degrees in parallel. While this approach is more complex, it affords the opportunity to discuss and explore how the degrees are interrelated and differentiated, and may lead to improvement in course content, prerequisites, sequencing, frequency-of-offerings, etc.

B. "WHICH OF OUR COURSES ADDRESS WHICH OF OUR DLOS?" – This mapping activity is a natural first step, can be completed prior to a faculty meeting, and builds a basic framework for more detailed mapping efforts. To start, sort the template matrix by the "Course" column and hide or delete the "CLO" column so that attention is focused on the course level. This matrix can then be emailed to each faculty member with a request that they (1) consider the courses for which they frequently serve as the primary instructor(s) and (2) mark the cells where they believe a given course builds capacity for student achievement for a given DLO. Once these efforts are compiled, the faculty can discuss the distribution of connections within the resulting course-DLO map. Such discussion can reveal the absence of connections (e.g., "mirage" DLOs visible from afar, but disappearing upon closer inspection) and segue into a discussion about what constitutes capacity-building towards a given DLO at the course level. Operationally, this mapping activity can be directly followed by the next activity below, potentially during the same faculty meeting.

C. "HOW DO OUR COURSES BUILD CAPACITY FOR STUDENT ACHIEVEMENT OF OUR DLOS?" – This mapping activity directly builds on the above mapping activity by having faculty collectively discuss and code the relative level of capacity building in each of their marked courses for a given DLO. Three potential sets of codes are:

> **I/P/D: I**ntroduced, **P**racticed, and **D**emonstrated (student-centered perspective; preferred here)
> **I/R/B: I**ntroduced, **R**einforced, and **E**mphasized (teacher-centered perspective)
> **B/I/A: B**asic, **I**ntermediate, and **A**dvanced (competency-centered perspective)

An outcome of this activity is a shared and transparent understanding of how the curriculum *currently* builds capacity for student achievement within each of its DLOs as well as the discovery of curricular "gaps and overlaps" that might surface in the form of such statements as:

> *"Students are **I**ntroduced to DLO-1 in these three lower-division courses, but never really given the opportunity to **P**ractice or **D**emonstrate achievement of DLO-1 anywhere else."*

> *"Students are clearly expected to **D**emonstrate master of DLO-2 in this upper-division course, but otherwise the curriculum doesn't **I**ntroduce it or provide opportunities to **P**ractice achievement of DLO-2."*

> *"Our gateway course **I**ntroduces DLO-4, but students don't encounter it again until asked to **D**emonstrate its achievement within our senior capstone course. Do we need to provide opportunities to Practice towards achievement of DLO-4 in our intermediate courses? If so, where?"*

D. "WHICH OF MY CLOS ALIGN WITH WHICH OF OUR DLOS?" – Given that student achievement of DLOs largely builds through courses and that all courses have an explicit set of CLOs, this third mapping activity involves focusing on the matrix's CLO column where relevant instructors can identify and enter specific CLOs that align with specific DLOs. Note that the *lack* of direct alignment of a given CLO to any of the DLOs does *not* mean that the CLO lacks value; indeed, course content and CLOs *should* be more than an atomization of DLOs. However, if the *vast majority* of a *required* course's CLOs *cannot* be aligned with *any* DLOs, then a clarification of the course's *intended* curricular role and refinement of its *enacted* curricular role are probably warranted. Both this and the preceding mapping activity will help faculty contextualize the required courses with respect to their DLOs as well as the broader Program Mission and Program Learning Goals. As already established in some SDSU degree programs, a excellent outcome of this mapping effort is to explicitly state these CLO-DLO alignments within course syllabi, which increases the degree's transparency, connectivity, and expectations for its students.

E. "WHAT OPPORTUNITIES EXIST WITHIN THE CURRICULUM FOR ASSESSMENT OF DLOS?" – This fourth mapping activity leverages the efforts of the preceding three activities by having faculty identify and describe, in matrix cells, those course-embedded assignments, projects, exam questions, etc. that assess CLOs that have been explicitly aligned with DLOs. Programs can then examine this map of "low hanging fruit," and use it to develop immediate to long-term plans for which course-embedded items might be refined, elevated, and implemented as Measures for the aligned DLOs. This map can also be used to identify curricular areas that would benefit from the development of course-embedded assessments that could serve at both the CLO and DLO levels. In addition to these "in-house" assessment opportunities, programs are encouraged to scan the literature on the scholarship of teaching and learning (SoTL) within their discipline for other appropriate assessments, concept inventories, etc. that might be aligned and adopted as Measures for their DLOs.

F. SOME SUMMARY THOUGHTS ON CURRICULAR MAPPING – The goal of this section was to provide a tiered sequence of curricular mapping activities to facilitate faculty discussion and action on student learning, degree integrity, and program assessment. To maximize the impact of these efforts, imagine if these curricular maps were shared with students, parents, employers, and the broader public via your departmental webpage and openly discussed within courses. Consider Doyle's (2008) response to this suggestion:

> "*If we were to give students who are declaring their major not only a checklist of the courses they need to complete, but also a map that illustrates where the skills, major ideas, and concepts learned in their beginning courses . . . will reappear in their later courses, we would be providing clear evidence that their education does not consist of a set of disconnected courses but, rather, an integrated, connected set of skills and knowledge that is purposefully designed to prepare them for a lifetime of learning.*"

VI. MOVING FORWARD: BUILDING CAPACITY, GROWING CULTURE, AND SUSTAINING PROGRESS

A. MANAGING YOUR ASSESSMENT EFFORTS THROUGH WEAVE – The development and implementation on meaningful Action Plans is critical for sustaining program assessment, improving student learning, and demonstrating degree integrity. However, if multiple program assessment efforts are underway on different timelines, tracking and facilitating such follow-through can become complex. Fortunately, if efforts are kept up-to-date within WEAVE, then the Action Plan Profile tool can generate useful agenda-item handouts for discussion and updating at program meetings.

WEAVE Process for Generating an Action Plan Profile:
1. In the navigation bar, click **Reports.**
2. Select the appropriate **Cycle** in the first column, **Action Plan Profile** in the second column, and your Entity (i.e., degree) in the third column. Click **Next** in the lower-right corner.
3. The resulting page will provide a variety of options; explore which structure works best for your specific needs and press the **Run** button to generate the report.
4. On the resulting window, click the **Open as PDF** button to save as a pdf file.
5. Note: The "Open Email List" button may be tempting to use to distribute information. However, you will only be able to send the report to those individuals that have direct access to your WEAVE entity (i.e., are authorized users and likely a small percentage of your program's faculty). Thus, to ensure distribution, you are encouraged to send such documents from your own email account.

B. ESTABLISHING A SEMESTER-BASED SCHEDULE FOR REPORTING ASSESSMENT IN WEAVE – Over the years, SDSU has varied in its timelines and expectations for program assessment. This process has now been streamlined with the establishment of semester-based WEAVE reporting deadlines of 1 December and 1 May. This semester-based "moving window" approach is designed to ensure:
(1) development of Findings and Action Plans for Measures from the previous semester,
(2) implementation of assessment work established for the current semester, and
(3) development of assessment plans for the subsequent semester(s).
A recommended checklist to help programs meet these semester-based deadlines is provided in Appendix D, and a rubric for programs to self-assess where they are with respect to assessment of their degrees is provided in Appendix E.

Programs are encouraged to establish a standing agenda item on assessment for program meetings, with the agenda item led by the Program Assessment Coordinator (PAC). While the PAC has a key role for coordinating program assessment and entering WEAVE content, programs should establish a clear faculty lead for the arc of each Measure (i.e., those steps outlined in Section IV). Faculty leads are encouraged to provide update to their colleagues and seek their input as a part of this standing agenda item. Finally, faculty leads are kindly requested to provide final drafts of their assessment content in a timely manner so that their PACs can incorporate of this content into WEAVE.

When developing assessment plans for their degrees, programs are encouraged to consider the following points:

- In what courses will which assessments take place, and at which point in the semester?
- Will a pre/post approach be used? How does the pre-treatment assessment relate to previous prerequisite course(s) in your or other programs?
- At what points in the students' program will assessment be conducted?
- Are there subpopulations of students about which your program are particularly concerned? How could student demographic data be used to identify common challenges and improve student success?
- How many students will be assessed and how will a sample be drawn?
- For assessment efforts involving multiple sections of the same course, how will the student sample be drawn from across all sections to avoid potential bias?
- If assessment is to occur in courses that include major and non-major students, how will the program ensure that these two populations remain identified throughout the process?
- Are there changes in advising, etc., that should be incorporated into a given Action Plan?
- How can assessment results be used to improve recruitment, retention, and graduation of students in your degree?

C. SUSTAINING PROGRAM ASSESSMENT ACROSS THE UNIVERSITY – The primary goal of this primer was to facilitate program assessment at the degree level. However, just a degree should be more than the sum of its courses, the university is more than the sum of its degrees, and broader success is facilitated by how higher institutional levels and leaders perceive and value programs' assessment efforts and evidence. Thus, according to Banta et al. (2009), summarizing Bresciani (2006), meaningful program assessment can be best sustained within a higher education environment that demonstrates the following characteristics:

- Key institutional leaders demonstrate that they value student learning and the key role of assessment.
- Leaders must create a culture of trust and integrity through consistent actions that demonstrate a commitment to ethical and evidence-based decision-making.
- Connections must be established between formative and summative assessment and between assessment for improvement and assessment for accountability.
- Curriculum design, pedagogy, and faculty development must be connected to delivery and evaluation of student learning.
- Faculty research and teaching must be connected so that they complement each other in practice and in the campus reward structure.

VI. SELECTED REFERENCES

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Senter, M.S. 2001. Academic Outcomes Assessment: Fads, Fallacies, and Footsteps. *in* Assessing Student Learning in Sociology. 2nd edition. C.F. Holm and W.S. Johnson (eds.) American Sociological Association. pp. 14-25.

VII. GLOSSARY

For terms that are strongly linked or together clarify one another, the relevant terms are repeated in gray below the alphabetized term. Note that the definitions for terms followed by an * are from the 2013 WASC Handbook of Accreditation.

Alignment – The logical connection, or active connecting, between the curriculum and the expected program learning outcomes. Curricular mapping is a common alignment activity.

Analytical scoring – An approach through which a given work is decomposed into a set of logical components or principles, and each is then evaluated as independently as possible. This approach facilitates a more granular and transparent analysis that can still be combined for a holistic scoring. Rubrics are a common manifestation of this approach.

> Holistic scoring – An approach through which a given work is considered as a whole with an emphasis on the interdependence of its components. This approach produces a single scores and is considered appropriate when the student work as a whole is viewed to reveal markedly more than the sum of its parts. While this approach may be valid, one should consider the degree to which it is readily linkable to outcomes and actions for improvement.

Anchor*– In assessment of student learning, an example of student work, usually used in conjunction with a rubric, that exemplifies a specific level of performance. Anchors are used in training sessions to norm raters' responses, to maintain calibration among raters, and to illustrate for students the meaning of language in rubrics.

Assessment of student learning*– An ongoing, iterative process consisting of four basic steps: 1. Defining learning outcomes; 2. Choosing a method or approach and then using it to gather evidence of learning; 3. Analyzing and interpreting the evidence; and 4. Using this information to improve student learning

Authentic assessment*– 1. An assessment approach that requires students to actively generate a response to a question, for example in an essay, rather than choose from a set of responses, e. g., a multiple choice or matching activity; 2. An assessment approach that uses an activity close to "real life" (i.e., a practicing professional in the field of study) rather than an academic construct such as a test.

Benchmark*– A point of reference or standard of excellence in relation to which something can be compared and judged. A specific level of student performance may serve as the benchmark that students are expected to meet at a particular point in time or developmental level. Retention and graduation rates may also be benchmarked against those of peer institutions or national norms.

Capstone*– A culminating project or experience, usually associated with undergraduates but also applicable to graduate education, that generally takes place in the student's final year of study and requires review, synthesis, and application of what has been learned over the course of the student's college experience. The result may be a product (e.g., original research, an innovative engineering design, an art exhibit) or a performance (e.g., a recital, an internship, student teaching). The capstone can provide evidence for assessment of a range of outcomes, e.g., core competencies, general education outcomes, and institution-level outcomes, as well as those for the major or graduate degree.

Ceiling and floor effects* – In assessment of learning, a ceiling effect occurs when the assessment activity is not challenging enough, or the scoring rubric is not ambitious enough, to accommodate higher levels of student performance. A floor effect occurs when data cannot represent a value lower than what the assessment activity or the rating scale allows.

Closing the loop*– Refers to the four-step assessment cycle (see "assessment of student learning") and the need to complete the cycle in order to improve learning. "Completing the cycle" may be understood as 1. completing step 4; or 2. completing step 4 and then repeating the cycle to see whether the changes implemented have produced the desired result.

Criteria for success – An explicit target statement of the minimum requirement for a program to declare itself successful with respect to some program learning outcome; often phrased as "X% of students will score Y or higher on Z", where Z is some specific measure for a given degree learning outcome.

Criterion-referenced*– Testing or assessment in which student performance is judged in relation to pre-established standards and not in relation to the performance of other students. See also "norm-referenced."

Culture of evidence* – A habit of using evidence in assessment, decision making, planning, resource allocation, and other institutional processes that is embedded in and characteristic of an institution's actions and practices.

Curriculum map*– A visual representation, usually in the form of a table or matrix, that shows the alignment of course outcomes with program learning outcomes. Well-crafted curriculum maps also show development of proficiency levels, for example using terminology such as "beginning," "intermediate," and "advanced" or "introduced," "developed," and "mastered."

Degree Qualifications Profile (DQP)* – A framework funded by the Lumina Foundation that describes the kinds of learning and levels of performance that may be expected of students who have earned an associate, baccalaureate, or master's degree.

Direct assessment*– 1. A way of gauging the quality of student learning by examining student work products and performances directly, rather than relying on surrogates, e.g., grades, credit hours, "seat time"; 2. A means by which institutions may award federal aid to students enrolled in competency-based programs. Authority for institutions to do so has existed under the Higher Education Act since 2005 but is assuming greater salience with the emergence of alternative educational models.

Indirect assessment*– A way of gauging the quality of student learning and the educational experience through the use of surveys, interviews, focus groups, etc. The findings are "indirect," i.e., filtered through the perceptions and opinions of the respondents.

Direct method*– A way of gathering evidence of learning directly, e.g., through scoring of actual student work or performances, rather than indirectly, e.g., through self-reports, surveys, etc. Direct evidence can be supplemented by indirect evidence and descriptive data. See "indirect method."

Indirect method* – A way to capture evidence of learning in the form of opinions—for example, of students, employers, and alumni—by means of surveys, focus groups, exit interviews, etc. Indirect evidence is mediated by personal perceptions and experiences, and learning can only be inferred. Indirect evidence may be supplemented by descriptive data. See "direct method."

Educational effectiveness (EE)*– Producing the intended learning results in an educational endeavor. As used by WASC, educational effectiveness includes clear and appropriate educational outcomes and objectives; and alignment at the institutional and program level of resources and processes, including assessment, to ensure delivery of programs and learner accomplishments at a level of performance appropriate to the degree or certificate awarded. At the institutional level, findings about learning are integrated into planning, budgeting, and decision making.

Educational Effectiveness Framework (EEF)*– A rubric-like matrix used by WASC evaluation teams to rate institutions as "initial," "emerging," "developed," or "highly developed" in the areas of student learning, the teaching/learning environment, and institutional learning, as well as holistically. Institutions frequently use the matrix for self-assessment.

Embedded assessment – Assessment that capitalizes upon student work being produced through existing course-based assignments to assess student achievement of specific learning outcomes. Such work can range from specific questions on exams to final projects; in general, the more complex the assignment, the more desirable to use an analytical scoring approach with a rubric.

Formative assessment* – Assessment intended to provide feedback and support for improved performance as part of an ongoing learning process, whether at the student, program, or institution level. See also "summative assessment."

Summative assessment*– 1. Assessment that occurs at the conclusion or end point of a course, program, or college experience to determine whether student learning outcomes have been achieved; 2. applied organizationally, the use of certain methods to evaluate the overall effectiveness of a program, an institution, or some element of the course of study. See also "formative assessment."

Goal*– 1. In assessment of student learning, a high-level, very general statement of learning expected of graduates, aligned with the institution's mission, vision, and values (more specific learning outcomes are derived from goals); 2. A statement developed by an institution or program related to strategic planning, financial development, and other important issues.

High-impact practice (HIP)* – HIPs include first-year seminars, common intellectual experiences, learning communities, writing-intensive courses, collaborative assignments, undergraduate research, diversity/global learning, service learning, internships, and capstone courses or projects. Research suggests that if students experience one or more HIPs in the course of their studies, they are more likely to persist, achieve higher levels of learning, and complete their degrees.

Holistic scoring – An approach through which a given work is considered as a whole with an emphasis on the interdependence of its components. This approach produces a single scores and is considered appropriate when the student work as a whole is viewed to reveal markedly more than the sum of its parts. While this approach may be valid, one should consider the degree to which it is readily linkable to outcomes and actions for improvement.

Analytical scoring – An approach through which a given work is decomposed into a set of logical components or principles, and each is then evaluated as independently as possible. This approach facilitates a more granular and transparent analysis that can still be combined for a holistic scoring. Rubrics are a common manifestation of this approach.

Indirect assessment*– A way of gauging the quality of student learning and the educational experience through the use of surveys, interviews, focus groups, etc. The findings are "indirect," i.e., filtered through the perceptions and opinions of the respondents.

Direct assessment*– 1. A way of gauging the quality of student learning by examining student work products and performances directly, rather than relying on surrogates, e.g., grades, credit hours, "seat time"; 2. A means by which institutions may award federal aid to students enrolled in competency-based programs. Authority for institutions to do so has existed under the Higher Education Act since 2005 but is assuming greater salience with the emergence of alternative educational models.

Indirect method* – In assessment of student learning, a way to capture evidence of learning in the form of opinions—for example, of students, employers, and alumni—by means of surveys, focus groups, exit interviews, etc. Indirect evidence is mediated by personal perceptions and experiences, and learning can only be inferred. Indirect evidence may be supplemented by descriptive data. See "direct method."

Direct method*– In assessment of student learning, a way of gathering evidence of learning directly, e.g., through scoring of actual student work or performances, rather than indirectly, e.g., through self-reports, surveys, etc. Direct evidence can be supplemented by indirect evidence and descriptive data. See "indirect method."

Liberal Education and America's Promise (LEAP)*– Project of AAC&U, the LEAP outcomes (also known as Essential Learning Outcomes) total 12, grouped under the headings "Knowledge of Human Cultures and the Natural and Physical World," "Intellectual and Practical Skills," "Personal and Social Responsibility," and "Integrative and Applied Learning."

"Meaning, quality, and integrity of the degree"*– In WASC usage, a phrase that refers to the goals, coherence, sequencing, alignment, resourcing, and overall quality of the educational experience leading to conferral of an institution's degree.

Mission*– In higher education, an institution's formally adopted statement of its fundamental reasons for existence, its shared purposes and values, and the students that it aims to serve. The mission is central to decisions about priorities and strategic objectives and provides a context for WASC decisions about quality and accreditation.

Norming*– 1. In assessment of student learning, a process of training raters to evaluate student products and performances consistently, typically using criterion-referenced standards and rubrics; 2. In accreditation, can be applied to other reviewing and rating processes, e.g. institutional evaluation, Commission actions.

Norm-referenced*– Testing or assessment in which student performance is judged in relation to the performance of a larger group of students, not measured against a pre-established standard. See also "criterion-referenced."

Objective*– 1. In assessment of student learning, a concise statement of what the instructor (or program or institution) intends a student to learn (on some campuses, objectives then lead to development of learning outcomes); 2. Sometimes used interchangeably with "outcome," but "outcome" has become the more common usage because of its more direct focus on the result (or "outcome") for the student; 3. In institution- or program-level planning, more specific statements derived from general goals; 4. In psychometrics, a test consisting of factual questions requiring short answers that can be reliably scored using an answer key, minimizing subjective judgments.

Outcome*– 1. In assessment of student learning, a concise statement of what the student should know or be able to do. Well-articulated learning outcomes describe how a student can demonstrate the desired outcome; verbs such as "understand" or "appreciate" are avoided in favor of observable actions, e.g., "identify," "analyze." Learning outcomes can be formulated for different levels of aggregation and analysis. Student learning outcomes are commonly abbreviated as SLOs, course learning outcomes as CLOs, and degree learning outcomes as DLOs. 2. Other outcomes may address access, retention and graduation, and other indicators aligned with institutional mission and goals.

Persistence*– Like "retention," refers to the rate at which students return to college from academic term to term and year to year, or "persist" in their education. Some educators interpret "retention" as putting the responsibility for degree completion on the institution, whereas "persistence" puts the responsibility on the student.

Program*– 1. Systematic, usually sequential, grouping of courses that forms a considerable part, or all, of the requirements for a degree in a major or professional field; 2. Sometimes refers to the total educational offering of an institution.

Program review*– A systematic process of examining the capacity, processes, and outcomes of a degree program or department in order to judge its quality and effectiveness and to support improvement. Historically, program review focused primarily on capacity and research output; more recently, educational outcomes and student success have been included. While student success and assessment of learning at the program level are an important part of program review, they should not be confused with the more encompassing process of program review.

Public good*– In higher education, a phrase expressing the notion that in addition to being a private good for individual students, education is a public good contributing to shared prosperity, a successful democracy, and a well-functioning society. As a public good, higher education is worthy of public support.

Reliability – In assessment of student learning, reliability addresses the quality of data collection and analysis, often based on the consistency of scoring by the scorer or scorers. In psychometrics and statistics, reliability is a mathematical expression of consistency, stability, and dependability of a given measurement.

Rubric*– 1. Tool for scoring student work or performances, typically in the form of a table or matrix, with criteria that describe the dimensions of the outcome down the left-hand vertical axis, and levels of performance across the horizontal axis. The work or performance may be given an overall score (holistic scoring), or criteria may be scored individually (analytic scoring). Rubrics are also used to communicate expectations to students. 2. WASC has developed a number of rubrics to assist teams and institutions in evaluating various aspects of their curriculum and assessment processes.

Signature assignment*– An embedded assessment method using an assignment—either the identical assignment or multiple assignments all constructed according to a common template—across multiple courses or sections of courses. A sample of students' work products is then examined using a rubric to arrive at judgments about the quality of student learning across the course, program, or institution. Alternatively, a signature question may be embedded, for example, in final exams.

Standardized*– A good practice meaning that a protocol or set of guidelines is consistently followed. For example, individuals may be trained in using scoring rubrics or conducting focus groups such that their activities are "standardized" to support the collection of reliable data. Commercially available tests are often referred to as "standardized tests," and "standardized" has acquired negative connotations in some circles.

Student-centeredness* – 1. A shift in perspective from teaching and inputs (e.g., assignments) to desired outcomes and what students actually learn; 2. An approach that places the student at the center of the educational process by providing curricular flexibility, accessible services, a supportive campus climate, and so on.

Summative assessment*– 1. Assessment that occurs at the conclusion or end point of a course, program, or college experience to determine whether student learning outcomes have been achieved; 2. Applied organizationally, the use of certain methods to evaluate the overall effectiveness of a program, an institution, or some element of the course of study. See also "formative assessment."

Formative assessment* – Assessment intended to provide feedback and support for improved performance as part of an ongoing learning process, whether at the student, program, or institution level. See also "summative assessment."

Sustainability* – Ability of an educational institution to maintain effective functioning and improve over the long term. Assumes financial viability, but also availability of human capital and other resources, as well as institutional vision, planning, and flexibility.

Transparency*– Disclosure by postsecondary institutions of information that may be sought by or of interest to policymakers, stakeholders, or the public. Such information may include financial data, retention and graduation rates, and various indicators of educational quality. Transparency and accountability are assumed to be mutually reinforcing.

Triangulation* – Use of multiple methods to generate more robust evidence and to see whether results converge or diverge.

Validation*– Occurs when a person, group, or instrument confirms that something has been accurately documented.

Validity*– In psychometrics and assessment of student learning, refers to how well a particular assessment method actually measures what it is intended to measure. Considerations include construct validity, content validity, and face validity. May also refer to consequences, i.e., whether an assessment has "consequential validity" and will support subsequent actions to improve learning. See also "reliability."

Reliability – In assessment of student learning, reliability addresses the quality of data collection and analysis, often based on the consistency of scoring by the scorer or scorers. In psychometrics and statistics, reliability is a mathematical expression of consistency, stability, and dependability of a given measurement.

Value-added assessment – The determination of the increase in student learning, ability, etc. produced by participation in a given endeavor (e.g., assignment, course, program) within an individual or cohort. One approach to value-added assessment at the program level is the assessment of some learning outcome as students enter the program and then as they graduate, where the program is essentially the "treatment." Such approaches provide an explicit means to demonstrate both student learning and program value.

VALUE rubrics* – Valid Assessment of Learning in Undergraduate Education. A set of 15 rubrics developed by AAC&U in collaboration with hundreds of faculty to assess learning outcomes defined by the LEAP project. Institutions may download the rubrics at no cost and are encouraged to modify them to suit local needs.

VIII. APPENDICES

APPENDIX A. WORKING WITH CYCLES AND ENTITIES IN WEAVE

The content below is provided to clarify some potentially confusing, but necessary, WEAVE components that allow the system to operate as a relational database with distinct cycles. In addition to consulting this content, please contact the University WEAVE Coordinator, Dr. Nina Potter (npotter@mail.sdsu.edu; 619.594.3303), for additional assistance and advice.

"Cycle and Entity Selection" – For every action you take with respect to any additions or changes to any WEAVE content, always verify that the correct Cycle (i.e., academic year, henceforth AY) and correct Entity (i.e., specific degree) are selected in the screen's upper-left corner just below the pull-down menu. For example, during fall semesters, when programs are entering Findings and Action Plans for Measures conducted during spring semester of the previous Cycle (AY), that previous Cycle (AY) should be selected prior to saving the entry. During fall semesters, programs will also be entering and refining new Measures for the current semester in the current Cycle (AY), in which case the current Cycle (AY) should be selected prior to saving the entry.

One of the benefits of WEAVE is its ability to carry-over many of its data elements (i.e., Mission, Goals, Outcomes, Measures, Targets, and Action Plans) from an ending Cycle (AY) into a new Cycle (AY). To ensure that this relational database benefit is maximized, please follow the suggestions below when encountering these entry lines within any given data element:

"Established in Cycle" – When a given data element is first entered, its "Established in Cycle" value will default to the current Cycle (AY). If the data element was actually established in a previous Cycle (AY), then be sure to select the appropriate AY from the pull-down menu.

"Active through Cycle" – As long as the program continues to use a given data element, its "Active through" value should be set to "Keep Active," which will ensure that the data element is carried over into the next Cycle (AY). However, if the given data element is not needed for the subsequent Cycle (AY), then the "Active through" value should be set to the current Cycle (AY). Data elements should rarely be deleted. By entering an AY for the "Active through" cycle, that data element will be available for historical reporting and to record changes and improvements in the assessment process. Important:

"Indicate Entry Status" – The "Indicate Entry Status" should be set to "In Progress" until the effort is completed and the entry is in its final form, at which time "Final" should be selected. Note that the selection of "Final' does not prevent subsequent editing during a given cycle.

APPENDIX B: UPLOADING AND LINKING EXTERNAL DOCUMENTS TO WEAVE

The **Document Management** option in WEAVE is far superior to trying to incorporate the complex content, formatting, visuals, etc. of pre-existing materials directly into WEAVE's text boxes. While the use of this option may at first appear circuitous, note that this approach allows you to upload a given document once, and then connect it to *all* relevant WEAVE items through a single list of all WEAVE entries for the degree. When you do link a document to a WEAVE entry, please be sure to include a short contextualizing reference in the entry's description.

Process for uploading and linking Documents to a Measure (or another item) in WEAVE:
1. For Cycle and Entity Selection, select the appropriate AY and degree, respectively.
2. Click the Document Management option on the Assessment pull-down menu.
3. Click the "Upload Document" button and select your document from its source.
4. Provide a "Document Name" and "Description"
5. Click the "Share this document with subordinate entities?"
6. Click your desired "Established in:" and "Active through:" cycles.
7. Click "Save and Continue".
8. Once the file is uploaded, click the "Edit Document Connection" Button.
9. Select the desired Measure(s) (or any listed component in WEAVE) and then click "Save".

APPENDIX C: POSTING AUTHENTIC STUDENT WORK TO WEAVE

In the Findings for a given Measure, programs are expected to provide some direct examples of student work that represent (1) an expected level of achievement and (2) an exemplary level of achievement to which all students should aspire. This inclusion of authentic student work serves to illuminate and humanize your myriad DLOs, Measures, Targets, Findings, and Action Plans for regional and disciplinary accrediting agencies. In addition, and perhaps more importantly, they provide a rich resource archive from which programs and the broader university can highlight exactly how our collective and intentional educational efforts empower students to achieve – thus moving us from a "tell them" to "show them" approach with potential donors, partners, and the broader public.

To post selected student works, programs must (1) de-identify the student work (2) obtain and archive a signed waiver/release forms from the student (and any parties whose likeness is included in audiovisual works). Waiver forms and additional directions are currently in development and will be posted to the Program Assessment and Institutional Accreditation website (assessment.sdsu.edu) before October 2014.

For Measures based on ensemble work (e.g., music performances, plays, etc.), we recommend that the instructor discusses their planned assessment efforts with their SLOPAC committee representative and/or the Associated Dean of the Division of Undergraduate Studies for advice and best practices.

For Measures based on works that are inherently public (i.e., abstracts and publications, public performances, etc.), programs should still obtain a signed waiver/release form from the student.

APPENDIX D: ADDITIONAL EXAMPLES OF ACTION PLANS

Example of a course-embedded Measure: This Action Plan is based on Findings for a Measure derived from an embedded assignment within an introductory "Astronomy for Science Majors" course at SDSU and is aligned with four DLOs that are common to the Astronomy BA and BS degrees. For the assignment, students produce an outline of the scientific research presented in a news article that describes an astronomy study, which provides an opportunity for students to examine the nature, context, and communication of scientific research. Student performance is scored using a rubric whose components are aligned with the program's DLOs. Based on the student performance on this rubric, the program developed the following Action Plan:

> *Of the DLOs assessed in the outlining assignment, students had the most difficulty with the writing of an outline with logical flow (i.e., DLO11: Express effective scientific arguments in written or oral form, to professional scientists or to the general public). The majority of the students that received deficient ratings (Score 1) treated the assignment as an outline of the structure of the article itself rather than an outline of the process that the researchers went through (or in other words, the scientific method). The professor already provides the students with an example outline as part of the assignment write-up, but it appears to be necessary to provide the students with more practice in seeing the logic of a scientific research project. Other assignments during the semester involve small science projects (involving astronomical observations) in which the students are being asked to construct procedures to obtain the best possible data and results. We are currently implementing modifications to the outline and observational project assignments to improve outcomes on this measure, and will re-assess this measure in the next academic cycle.*

Example of a non-course-embedded Measure: This Action Plan is based on Findings for a comprehensive Measure, termed the JMS Assessment Exam, that was designed by the faculty of the SDSU School of Journalism and Media Studies. The exam is derived from a pool of 426 multiple-choice questions developed by the faculty, with the questions coded with respect to their aligned DLOs, the courses in which capacity is built for the DLOs' achievement, and the relative question difficulty as determined by faculty. The Assessment Exam was deployed to all students in their capstone courses, and will start to be deployed to incoming majors to afford a pre/post (i.e., "learning gains") approach. Findings revealed that all established targets were met for all DLOs except DLO-9 (i.e., *Critically evaluate their own work and that of others for accuracy, fairness, clarity, appropriate style, and grammatical correctness*). To improve student achievement and degree integrity for this DLO, the JMS faculty developed the following comprehensive multi-course Action Plan for their BA in Journalism and Media Studies:

> *Using School of JMS criteria, overall student performance on the JMS Exit Assessment for DLO-9 was categorized as "soft," and therefore the Target was deemed to be Partially Met. Thus, the Undergraduate Committee voted to request all faculty to review the content of their courses to determine if additional instructional resources could be dedicated to improving student performance on this DLO. The Undergraduate Committee then met to (1) review plans submitted by individual faculty members to enhance student performance on this DLO and (2) supplement the existing matrix of JMS Assessment items that measure student performance on this DLO. The following curricular changes were endorsed by a unanimous vote of the Undergraduate Committee:*

JMS 220 Writing for Mass Media: Currently in JMS 220, students focus on the importance of accuracy when writing for different media and platforms. As part of this, students create an accuracy checklist that they use to critique their own work, in order to seek a level of perfection in their own work. As part of this activity, Professor Schmitz Weiss will expand this assignment to allow students to open their accuracy checklist to critiques by classmates (peer review). Professor Schmitz Weiss will discuss this new component in several class sessions.

JMS 420—Public Affairs News Reporting: The course already requires students to peer-edit each other's stories prior to turning them in to the instructor. Strict deductions are taken for errors in style and grammar, spelling and punctuation. There are currently some discussions of the importance of editing, but Professor Lockwood intends to formalize the importance of self-editing and peer editing by creating at least one lecture on the topic, with the student learning outcome of imparting skills for how to edit. The students will focus on editing as a multi-step process that always concludes with peer edits. Professor Lockwood will create a few exercises for points that assess their students' ability to edit as well as assesses their understanding of the importance of editing.

JMS 430: Digital Journalism: Students are required to understand how to search and find information online in order to be digitally savvy about searching. This exercise helps them to critically evaluate how they search, how to be skeptical about their own searches, and how to improve their skills in this area. As part of this activity, Professor Schmitz Weiss gives them assignments to search for information online without any instruction to find the verified and accurate information. She will expand this exercise by asking students to create an accuracy checklist that they can use along with that activity that they can share with others in the class and we can discuss how that helped them in searching for the correct information.

JMS 450—Media and Cultures: Professor Zhong will add two new written assignments in the class: one is a report of an interview with a media personnel and the other is a summary of a popular culture consumption log that students conduct over a three-day span. These added assignments help students improve their writing and the ability to follow APA style.

JMS 550—Multimedia Lab in Journalism: Professor Coates Nee will give students a writing test at the beginning of the semester to assess their strengths and weaknesses. Professor Coates Nee will ask them to prepare their own accuracy checklist, based on the results of that test. Students will use this checklist during the semester to evaluate their written work and the work of peers in the class.

JMS 581—Research Methods in Public Relations: The depth interview report is the most extensive writing activity in this course. Starting in the Fall 2013, Professor Dozier will provide students with an editing checklist. They will be asked to (1) use the checklist on the final draft of the depth interview report and (2) certify the quality of the editing throughout the report with regard to the instructions in the Style Guide and with regard to all aspects of grammar, style, syntax, and clarity of expression. If Professor Dozier's editing of the same document indicates that errors were not caught by the students, they will be required to edit the report again, identify errors they missed the first time, correct the document, and resubmit for a lower score.

JMS 591—Global Technology: Professor Eger will require each student to prepare a final paper in cooperation with another student. Students must review each other's final work product for clarity, accuracy, and style.

SEMESTER CHECKLIST FOR PROGRAM ASSESSMENT
ACTIONS RELATED TO THE PREVIOUS SEMESTER . . .

The established Faculty Lead for each conducted Measure should, by some program-established deadline (e.g., 15 November and 15 April are recommended), complete the following for all Measures conducted during the previous semester:

☐ Coordinate the assessment of collected student work in light of the Measure's description and the related Degree Learning Outcome(s)

☐ Refine/revise the Measure's description and secure digital versions of relevant documents (i.e., assignment, rubric, etc.)

☐ Draft a Findings statement and develop supporting documents (e.g., graphs of scoring distribution, etc.) based on assessment results and the established Target

☐ Select, where relevant and appropriate, samples of student work that represent the Targeted achievement as well as exemplary achievement as defined by the Measure

☐ Obtain signed student release/waiver forms and de-identify student work to the degree possible (see process and forms at assessment.sdsu.edu or Appendix C of the Program Assessment Primer)

☐ Present the arc of the Measure, Target, and Findings at a program meeting, lead discussion and development of Action Plans, and draft the Action Plan as a WEAVE entry

☐ Provide final text for Findings and Action Plans, along with all supporting documents, to the Program Assessment Coordinator for editing and uploading to WEAVE

The Program Assessment Coordinator should, by the WEAVE reporting deadline of 1 December or 1 May, complete the following for all Measures conducted during the previous semester:

☐ Receive, finalize, and enter all Faculty-Lead-provided content into WEAVE

☐ Associate Measures with appropriate DLOs and other Associations (GE, etc.) in WEAVE

☐ Upload and link supporting documents (e.g., assignment, rubrics, score distributions, de-identified student work, etc.) to appropriate WEAVE entities and entries

☐ Acquire (from Faculty Leads) original signed copies of student waiver/release forms and archive these forms in their program's files with hard-copies of the identified student work.

ACTIONS RELATED TO THE CURRENT SEMESTER . . .

During the first program meeting of the current semester:

☐ Program Assessment Coordinator (PAC) overview all planned implementations of Measures and Action Plans

☐ Program confirms Faculty Leads for Measures and Action Plans as appropriate

Over the course of the current semester:

☐ Program Assessment Coordinator works with program leader and Faculty Leads to ensure and facilitate implementation of the established Measures and Action Plans

☐ Faculty Leads implement their respective Measure(s) for the current semester and insures retention of any relevant student work for subsequent assessment

☐ Faculty Leads implement scheduled aspects of Action Plans from their past Measures

ACTIONS RELATED TO THE FORTHCOMING SEMESTER . . .

Over the course of the current semester, the Program Assessment Coordinator (PAC) should:

☐ Facilitate development of strategic assessment plans for the forthcoming (and later as appropriate) semester in the form of new or revisited Measures

☐ Inspect existing Action Plans to forward plan for any scheduled implementation or reassessments

APPENDIX F: RUBRIC FOR PROGRAM ASSESSMENT EFFORTS AND WEAVE CONTENT

Please see the full-page rubric on the next page. Programs are encourage to use this rubric to self-assess where they are with respect to assessment of each of their degree. Note than an earlier version of this rubric was deployed to all academic programs' chairs/directors and assessment coordinators in Spring of 2014; this earlier version of the rubric and the compiled self-scoring for 76 programs may be found at assessment.sdsu.edu under the "Program Assessment" tab.

SDSU Rubric for AY14/15 Program Assessment Efforts and WEAVE Content

Item	A. Initial	B. Emerging	C. Developed	D. Highly Developed	Resource	Location
1. Program Mission statement designed to promote curricular coherence, student recruitment, and stakeholder collaboration:	Program Mission lacking altogether or poorly constructed	Program Mission incomplete with little direction and cohesion; overly narrow or broad	Program Mission generally well-organized, perhaps more perfunctory than aspirational	Program Mission thorough, well-organized, and aspirational; establishes value of program to university and public	Program Assessment Primer (PAP) Section III	Program Mission Entry
2. Program Learning Goals (PLGs) are focused on (typically) 3-7 seven broad student-centered goals common to all of its degrees:	PLGs lacking altogether or poorly constructed	Some PLGs identified, but incomplete capture of program's aspirations for all of its degrees	Well-stated, realistic, and assessable set of PLGs for disciplinary abilities and habits of mind common for all of its degrees	Well-stated, realistic, and assessable set of PLGs including disciplinary abilities, habits of mind, and life-long learning skills for all of its degrees	Program Assessment Primer Section III	Program Learning Goals Entry
3. Rigorous and assessable Degree Learning Outcomes (DLOs) are established and communicate the key abilities, habits-of-mind, etc. that students should achieve:	DLOs essentially lacking or generally not representative of disciplinary and institutional norms	DLOs are established, but some are of questionable rigor for disciplinary and institutional norms and/or difficult to assess	DLOs are rigorous, assessable, and appropriate for the degree	DLOs are rigorous, assessable, and appropriate for the degree and reinforce metadisciplinary life-long learning (c.f., GE Capacities and Goals)	Program Assessment Primer Section III	Degree Learning Outcomes Entry
4. Assessed DLOs are associated with appropriate Measures, with a focus on direct measures of student work (versus indirect measures such as interviews, surveys, etc.):	Measures largely lacking or only indirect (e.g., surveys, interviews, etc.).	Measures for assessed DLOs are highly variable in appropriateness; more direct measures needed	Generally robust and appropriate direct Measures established for assessed DLOs; indirect measures supplement direct measures	Highly robust, appropriate, direct Measures established for all DLOs; multiple cycles of assessment-driven improvement evident, as appropriate, for most DLOs	Program Assessment Primer Section III	Measures and Findings Entries
5. Targets possess proposed/revised/justified levels/goals for student achievement:	No Targets proposed for any Measures	Targets proposed for some Measures, but little reasoning or justification evident	Targets proposed for many Measures with clear reasoning and justification	Targets established for all Measures with clear reasoning, justification; program strives to refine/increase Targets	Program Assessment Primer Section IV	Measures and Findings Entries
6. For assessed DLOs, Findings are clearly reported and incorporated into Action Plan to improve student learning and program integrity:	Little to no Findings reported; Action Plans essentially non-existent	Some Findings reported, but generally not used to inform Action Plans; Action Plan perfunctory at best if present	All Findings reported, include student work, and used to inform Action Plans; Action Plans frequently involve loop-closing	All Findings reported, include student work, and used to inform Action Plans; Action Plans improve degrees through intentional and consistent loop-closing	Program Assessment Primer Section IV, Appx. B, C	Measures and Findings Entries
7. Course and their Course Learning Outcomes (CLOs) are actively explored/aligned/mapped/etc. with respect to DLOs; efforts serve to identify assessment opportunities, improve degree integrity, and communicate course and degree expectations to students:	No explicit DLOs, so little to no exploration/alignment/mapping	Some exploration/alignment/ mapping for some areas; little inclusion of these emerging efforts within WEAVE; more intentional and collaborative efforts needed for progress	Active and explicit curricular mapping of courses and their CLOs to identify relevant alignments with DLOs; inclusion of these efforts within WEAVE with plans to use this information to inform assessment efforts	All courses, appropriate CLOs, and other degree requirements (i.e., international experiences, etc.) are mapped onto DLOs as appropriate through intentional community effort; process periodically revisited to improve degree coherence and guide assessment efforts	Program Assessment Primer Section V	In not underway, initiated for next APR Self-Study and included as standing Action Plan Entry
8. WEAVE content demonstrates program commitment to, and completion of, semester-based programmatic assessment cycle for their constituent degrees:	Effort is absent to sparse and provides limited means to improve student learning; cycle essentially absent	Efforts are mix of compliance and isolated action with limited coordination and intentionality; some cycle activity evident, but impact limited	Most faculty committed to semester-based cycle; Action Plans implemented using previous-cycle evidence and current-cycle actions	Program committed to semester-based cycle as a collaborative opportunity; Action Plans implemented using previous-cycle evidence and current-cycle actions	Program Assessment Primer Section VI, Appx. D, E	Overall WEAVE content
9. Program's long-term commitment to demonstrating educational effectiveness and improving student learning through evidence-based assessment can most accurately be described as:	Isolated areas of effort; majority of faculty view assessment as compliance and discount effort	Commitment to educational effectiveness in some areas, many faculty view assessment as largely compliance with limited capacity to improve student learning or demonstrate degree integrity	Broad commitment to educational effectiveness; few areas require improvement; faculty largely embrace assessment as opportunity to improve student learning and demonstrate degree integrity	Clear commitment to educational effectiveness; faculty embrace assessment as opportunity to improve student learning and demonstrate degree integrity to the university and beyond	Program Assessment Primer Section VI; APR Self-Study Template	Overall WEAVE content; APR Self-Study Document

APPENDIX G: OVERVIEW OF THE WASC CORE COMPETENCIES

As defined in WASC Standard 2, Criterion for Review 2.2, institutions are required to report on graduating students' levels of performance in five "core competencies". WASC defines competencies as "a specific skill, body of knowledge, or disposition; can also refer to the student's ability to demonstrate that learning." In this sense, these Core Competencies represent universal student learning outcomes that complement the seven Essential Capacities of the SDSU General Education program

The general definitions below are drawn from the 2013 WASC Handbook of Accreditation, but we stress that these are not all inclusive. In WEAVE, we encourage you to link your Measures to these Core Competencies using the Associate function.

Oral communication – Communication by means of spoken language for informational, persuasive, and expressive purposes. In addition to speech, oral communication may employ visual aids, body language, intonation, and other non-verbal elements to support the conveyance of meaning and connection with the audience. Oral communication may include speeches, presentations, discussions, dialogue, and other forms of interpersonal communication, either delivered face to face or mediated technologically.

Written communication – Communication by means of written language for informational, persuasive, and expressive purposes. Written communication may appear in many forms, or genres. Successful written communication depends on achievement of the conventions of the written language, facility with culturally accepted structures for presentation and argument, awareness of audience, and other situation-specific factors.

Critical thinking – The ability to think in a way that is clear, reasoned, reflective, informed by evidence, and aimed at deciding what to believe or do. Dispositions supporting critical thinking include open-mindedness and motivation to seek the truth.

Quantitative reasoning – The ability to apply mathematical concepts to the interpretation and analysis of quantitative information in order to solve a wide range of problems, from those arising in pure and applied research to everyday issues and questions. It may include such dimensions as ability to apply math skills, judge reasonableness, communicate quantitative information, and recognize the limits of mathematical or statistical methods.

Information literacy – According the Association of College and Research Libraries, the ability to "recognize when information is needed and have the ability to locate, evaluate, and use the needed information" for a wide range of purposes. An information-literate individual is able to determine the extent of information needed, access it, evaluate it and its sources, use the information effectively, and do so ethically and legally.

APPENDIX H: REVISION HISTORY FOR PROGRAM ASSESSMENT PRIMER

Version 1.0:
  01 September 2014:
  - Version finalized and posted in pdf form to assessment.sdsu.edu.
  - PDF provided to SDSU leadership for email distribution to university leaders, college deans, academic program chairs/directors, and program assessment coordinators