2021

Sierra College

Assessment Guidebook

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Preface

Assessment Guidebook Introduction

We are subject area experts who are passionate about education and lifelong learning working within an environment that necessitates accountability. Assessment is the ultimate teaching tool and conduit of feedback used as a means to improve educational practices. When educators become actively involved in the assessment process, our students, our collegiate programs and our community benefit. This guidebook was created as a resource for Sierra College faculty, staff and administrators. It was designed to: 1) Facilitate understanding of the assessment process at Sierra College 2) Provide resources to fulfill the assessment requirements 3) Take advantage of assessment practices to improve institutional effectiveness.

Expected Learning Outcomes for this Guidebook:

- Create or update assessment plans following a three year cycle
- Develop or revise Student Learning Outcomes for Courses (CSLOs), Programs (PSLOs), Student Services (SSLOs) and the Institution (ISLOs)
- Explain the assessment process and its connection to improvement
- Provide opportunities for faculty to actively engage in the assessment process

Assessment is an activity that intentionally finds ways to improve student learning through meaningful inquiry. As faculty participate in institutional dialogue, the process becomes seamless, valuable and collaborative. We want to emphasize that **assessment results will never be used punitively against faculty**--- instead results are used to help faculty promote student learning and success. At Sierra College, we are committed to an assessment process that will not undermine or impinge on academic freedom.

We know that assessment must be an integral part of any successful educational institution. A well planned and executed assessment process will help the college accomplish its mission and goals.

Sierra College's Mission Statement:

> Sierra College provides an academic environment that is challenging and supportive for students of diverse backgrounds, needs, abilities, and goals with a focus on access, equity, student-centered learning, and achievement. The college is committed to practicing diversity and inclusion, and recognizes that a diverse and inclusive curriculum and workforce promotes its educational goals and values. Institutional learning outcomes guide the college's programs and services, encouraging students to identify and expand their potential by developing knowledge, skills, and values to be fully engaged and contributing

members of the global community. Sierra prepares students by offering Associate's and transfer degrees, certificates, career and technical education, foundational skills, as well as lifelong learning and enrichment.

The American Association of Higher Education (AAHE) identified the principles of good assessment. These principles will guide our efforts at Sierra College:

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's easy, rather than a process of improving what we really care about.

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

3. **Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.** Assessment is a goal-oriented process. It entails comparing educational performance with educational purposes and expectations -- those derived from the institution's 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 is best fostered when assessment entails a linked series of activities undertaken over time. This may mean tracking the process of individual students, or of cohorts of students; it may mean collecting the same examples of student performance or using the same instrument 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 way of enacting that responsibility. Thus, while assessment efforts may start small, the aim over time is to involve people from across the educational community. Faculty play an especially important role, but assessment's questions can't be fully addressed without participation by student affairs educators, librarians, administrators, and students. Assessment may also involve individuals from beyond the campus (alumni, trustees, employers) whose experience can enrich the sense of appropriate aims and standards for learning. Thus understood, assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement.

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

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

about learning outcomes is seen as an integral part of decision making, and avidly sought.

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

Borrowed from National Institute for Learning Outcomes Assessment and the AAHE (Banta, T., Hutchings, P., Ewell, P., 1992).

Principles of Assessment

Why do we Assess?

Pedagogical Practices
Assessment helps align instruction and student services in order to meet program and institutional goals. In the classroom, assessment can dramatically improve teaching effectiveness and student learning. Outside the classroom it informs institutional effectiveness and improvement.

- Assessment makes the learning process more effective
- Assessment helps make effective resource allocation decisions
- Assessment facilitates student feedback and increases student awareness of institutional goals and purposes
- Assessment helps faculty and service providers improve instruction
- Assessment creates opportunities for institutional dialogue aimed at improving student success

Commitment to Constituents
We assess because we have an obligation to our educational community---students, alumni, instructors, staff, administrators, advisory boards, policymakers, employers and the public. The public and entire educational community invests in education and we have a responsibility to maintain the quality of that investment.

Accreditation
The Accrediting Commission for Community and Junior Colleges (ACCJC) requires assessment as a part of the accreditation process.

> Standard II: Student Learning Programs and Services
> "The institution assesses its educational quality through methods accepted in higher education, makes the results of its assessments available to the public, and uses the results to improve educational quality and institutional effectiveness (ACCJC, 2014, P.5).

Standard II, A3: Instructional Programs
The institution identifies and regularly assesses learning outcomes for courses, programs, certificates and degrees using established institutional procedures. The institution has officially approved and current course outlines that include student learning outcomes. In every class section students receive a course syllabus that includes learning outcomes from the institution's officially approved course outline (p.5).

Standard II, A11: Instructional Programs
The institution includes in all of its programs, student learning outcomes, appropriate to the program level, in communication competency, information competency, quantitative competency, analytic inquiry skills, ethical reasoning, the ability to engage diverse perspectives, and other program-specific learning outcomes (p.6).

Standard II, A 13: Instructional Programs
All degree programs include focused study in at least one area of inquiry or in an established interdisciplinary core. The identification of specialized courses in an area of inquiry or interdisciplinary core is based upon student learning outcomes and competencies, and include mastery, at the appropriate degree level, of key theories and practices within the field of study (p.6).

Standard II, A16: Instructional Programs
The institution systematically strives to improve programs and courses to enhance learning outcomes and achievement for students (p.7).

Standard II, B3: Library and Learning Support Services
The institution evaluates library and other learning support services to assure their adequacy in meeting identified student needs. Evaluation of these services includes evidence that they contribute to the attainment of student learning outcomes. The institution uses the results of these evaluations as the basis for improvement (p.7).

Standard II, C2: Student Support Services
The institution identifies and assesses learning support outcomes for its student population and provides appropriate student support services and programs to achieve those outcomes. The institution uses assessment data to continuously improve student support programs and services (p.8).

What is Assessment?

According to the Accrediting Commission of Career Schools and Colleges (ACCSC), assessment is a process or tool that aims to improve the quality of instruction and improve student learning. A student assignment isn't an assessment on its own, rather the process of reviewing the assignment, grading the assignment, getting feedback from the assignment and interpreting the overall results describes the assessment more fully.

- Assessment is the systematic collection and analysis of information to improve student learning (UMass, 2001).

- Assessment tells us what our students are learning and how well they are learning that material (TexasTech, 2011).

- Assessment outside the classroom includes measuring the structured events that complement academic programs and enhance the overall educational experience (Foothill College, 2007).

The Assessment Process

Who is Responsible for Assessment?

For student learning improvement to be successful, it must be a visible priority in all practices and structures across the college. Assessment is the responsibility of faculty, staff and the administration. Because assessments have the potential to benefit everyone we are committed to sustainable continuous quality improvement. Faculty is responsible for the systematic administration of assessments for courses and programs. Program chairs are responsible for the coordination of assessment practices within their respective departments and providing opportunities for faculty to engage in assessment dialogue. Student Services is responsible for providing advocacy and support to students throughout their educational term. The Educational Effectiveness Committee (EEC) is responsible for measuring the performance of institutional outcomes and evaluating the results for the purposes of improving the overall student experience and aligning institutional assessments to the strategic planning process. The EEC is responsible for managing the SLO processes and making assessment related recommendations to the Academic Senate, the VP of Instruction and VP of Student Services.

Faculty Tasks

- Include course outcomes (CSLOs) on all course syllabi. Address these outcomes as a regular addition to the course introduction. Course SLOs are part of the official course outline of record and can be found in WebCMS.

- Assess CSLOs according to the assessment schedule developed by the department.

- Record assessment results using the Student Learning Assessment Summary (SLAS) form.

- Attend department meetings to discuss methods to improve teaching and learning.

- Contact your department chair to suggest modifications to existing CSLOs.

Program Chair Tasks

- Verify that every course, program, certificate and degree has CSLOs and PSLOs. Include specific certificate and degree outcomes if they are different from the general program outcomes. All CSLOs must map to at least one PSLO which must map to at least one ISLO. All outcomes must be current and kept up to date.

- Create and implement an assessment plan that allows the department to complete assessments for all active courses and programs within the 3-year cycle. Revise the assessment schedule as needed.

- Prompt faculty to complete assessments per the assessment schedule. SLAS forms are to be used by faculty to capture assessment data and related information. Collect SLAS forms.

- Lead your department in meaningful discussion about assessment results and related actions. Dialogue is encouraged during department meetings and institutionally planned events.

- Report SLO assessment results on the Departmental Assessment Analysis (DAA) form and submit in TEAMS under the GRP_SLO Assessment Team. Submit completed forms (SLAS and DAA) in your department's folder. Due by each term's census date.

- Seek out other departments to discuss results, as needed. Devise action plans and record on the required forms. Implementation of planned actions and reassessment are the final pieces that allow for the completion of the assessment process. The current department chair should aim to adequately document the assessment process as it provides necessary information for the incoming department chair.

- Consult the Research department to provide assessment reports for your analysis.

- Refer to the Assessment and SLO information on the Sierra College website.

- Attend a curriculum review meeting to identify outcomes for all newly introduced courses. (Form E of the COR)

- Confirm that SLOs are consistently communicated across the campus (website, catalog, Banner, degree sheets, syllabi). All changes to PSLOs and CSLOs must start in WebCMS.

Student Services Tasks

- Verify and maintain currency of your department's outcomes (SSAOs) using the Outcomes MPS created for your department.

- Follow the assessment schedule determined by the program and assess SSAOs as identified.

- Use the SLAS form to record the results of your assessment and related actions.

- Attend department meetings to discuss ways to improve student services including student learning and educational experiences.

- Contact your department chair to suggest modifications to existing SSAOs.

Educational Effectiveness Committee Tasks

- Measure the performance of institutional outcomes and evaluate the resulting data.

- Participate in meetings to analyze assessment activities, plan and determine actions for improvement.

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- Help the college use assessment results to assist in effective resource allocation, contribute to the decision-making processes of the college, and contribute meaningful dialogue in the development of the college's Strategic Master Plan.

- Report results and action recommendations annually at a campus-wide forum and to Strategic Council.

When do we Assess?

While many faculty already assess learning in courses and in programs, it is important that the institution follows an assessment cycle. The cycle includes a four part process: Planning, Implementing, Assessing, and Reporting/Revising. Completion of all steps in the assessment cycle verifies that the assessment process is successful. Assessment of SLOs must be ongoing, systematic and used for continuous quality improvement. The college sets aside two days every year for departments to discuss results and formulate an action plan. Each department uniquely participates in the assessment cycle by identifying their process and tracking the assessment activities. All courses and programs must be assessed within a 3 year cycle. The EEC has been charged with helping faculty through this process as needed.

What you should know about the new assessment process at Sierra College?
  1. The process was created by an interdisciplinary faculty team and approved by the Faculty Senate.
  2. The EEC welcomes faculty feedback---we encourage widespread participation to improve and expedite this process.
  3. Failure to complete assessment tasks by the appointed time may result in consequences for the entire institution (as regulated by ACCJC).

Assessment Cycle
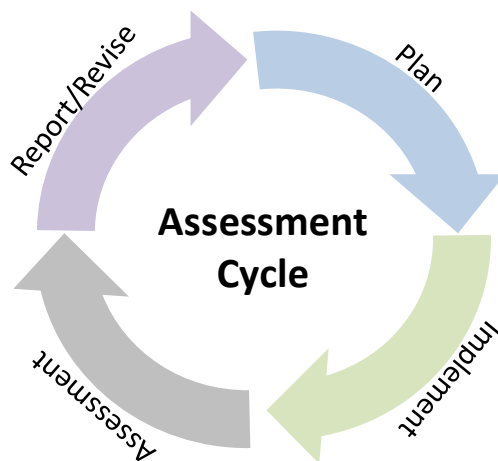
The following Student Learning Outcome Assistant Description and Responsibility and Assessment Participation Policy was approved by the Academic Senate:

Student Learning Outcome Assistant Description and Responsibility

The primary responsibility of Student Learning Outcome Assistants is to help guide and support faculty to participate in the SLO assessment process to ensure that student learning is regularly and meaningfully assessed at the course and program level. For department chairs, faculty, and staff, SLO Assistants act as the first point of contact and support to assist in: (1) understanding and developing appropriate outcomes for courses, program degrees, and certificates; (2) understanding and developing a three-year assessment cycle plan; (3) understanding how to complete and submit outcome and assessment forms (Spreadsheet, DAA and SLAS); (4) developing meaningful and engaging Planning & Assessment Day activities for department meetings.

SLO Assistants also (1) coordinate the updating of outcomes across the college's data management systems; (2) forward student learning assessment results for data entry and web publication; (3) monitors a group of departments and communicates with department chairs about apparent incomplete assessment participation - practices that deviate from agreed upon college outcomes/assessment processes.

Assessment Participation Policy

Two weeks prior to semester's final day of instruction, SLO Assistants will provide the Educational Effectiveness Committee (EEC) chair(s) with a report on the status of each department's assessment participation for that semester. Outcome assessment participation per semester is complete by having (a) completed and submitted SLAS forms, (b) completed and submitted DAA forms, and (c) a complete and current program SLO Mapping and Planning Spreadsheet including an adequate three-year assessment plan. Incomplete SLO assessment participation is defined as departments who have not submitted the above items to their SLO Assistants. When a program's SLO assessment is incomplete the EEC chair(s) will contact department chairs and offer support for the completion of the SLAS forms, DAA forms and SLO Mapping and Planning Spreadsheet. The EEC chair(s) will provide a program assessment status report to the relevant AEA and the Vice President of Instruction.

Each year the EEC will complete and present an executive summary to Academic Senate and Strategic Council that includes:

1) An overview of the college's assessment participation.
2) Evidence generated by, and analysis of, the outcome assessment process.
3) An overview of best practices and meaningful changes based upon assessment results.

Assessment Cycle for Instructional Programs

PLAN	• **Identify and/or revise CSLOS and PSLOs (including those for degrees and certificates)** • **Map new and existing CSLOs to PSLOs to ISLOs** • **Submit changes in the SLO Mapping and Planning Spreadsheet to TEAMS** • **Publish all changes to the Sierra College website, Banner, and all course syllabi** • **Develop a meaningful departmental assessment plan**	Create a 3- year assessment plan (minimum requirements): • All active courses should identify 1-3 student learning outcomes (CSLOs) • Each CSLO must map to at least one PSLO • All active courses must be assessed within the 3-year cycle • Identify at least one CSLO for the assessment of each active course • All PSLOs must be assessed within the 3-year cycle • Assessing a PSLOs can be accomplished by assessing an aligned CLSO. Alternately, PSLOs may be assessed directly through the use of an assessment method (use SLAS form to do so. • All programs should identify 1-3 student learning outcomes (PSLOs) • PSLOs (including those for degrees and certificates) must map to at least one ISLO SLOs are to be consistently communicated to faculty, students, administration and the community

IMPLEMENT	• **Select an assessment method for each CSLO and PSLO to be assessed in the current term.**
	• **Adopt performance criteria and determine specific thresholds for each**
		Create an assessment:
		• Each department is to develop a specific assessment plan for each course to be assessed in a given term
		• Outcome assessment criteria are institutionally adopted as follows:
		    ○ Mastery, Proficiency and Unsatisfactory (see SLAS form)
		• Assessment plans must:
		    ○ Identify which courses and programs are to be assessed
		    ○ Identify which SLOs are to be assessed
		    ○ Identify which methods are to be used for assessment
		    ○ Identify thresholds for each level of assessment criteria

ASSESSMENT	• **Collect results for assessed CSLOs and PSLOs per the department assessment plan** • **Record and analyze assessment results using Student Learning Assessment Summary (SLAS) forms** • **Create an action plan to improve student learning** • **Conduct student surveys to demonstrate student awareness of outcomes**	For all assessments in a given term: • Conduct assessment of CSLOS and PSLOs using the parameters outlined in the department assessment plan • Analyze, interpret, and record results • Create an action plan for each course or program • SLAS forms are to be used to record individual assessment data • SLAS due date: census date The Research Department deploys student surveys which capture the degree of student awareness of outcomes.
REPORT/REVISE	• **Report departmental findings of the assessment results using Departmental Assessment Analysis (DAA) forms** • **Implementing changes outlined in the action plan**	For all assessments in a given term: • DAA forms are to be used to capture departmental dialogue concerning assessment results and action plan • Initiate changes based on the action plan • Continue the above assessment process for all active courses and programs until each has been assessed within the 3- year cycle. • DAA due date: census date Assessment results are to be continuously available to faculty, students, administration and the community.

Following the Assessment Cycle, departments will integrate assessment results in Program Review, Curriculum Review and connect results to ePAR.

The above cycle should be modified by other instructional and non-instructional departments to assess SSAOs and ISLOs.

The Process for Assessing SLOs (used with permission from Cabrillo College)

1. Faculty and Staff assess CSLOs in their classes (or in their functional areas of Student Services for SSLOs). Faculty and staff choose the assessment method to measure the outcome, unless the department has made other arrangements. Faculty uses the SLAS form to record their results.

2. Faculty share the results of the assessment in a department meeting. Results may be shared across disciplines when courses are shared by departments, degrees or certificates. Sharing results may include:
- Distributing copies of the specific assignment used to assess the CSLO and/or the rubric used to grade.
- A general discussion of student strengths and weaknesses on the assessment
- The plans the faculty member has made to improve teaching and learning.
- Asking for help needed from the department or college to improve student success.

3. Once everyone has shared results the department dialogues about:
- Trends seen across the department.
- What can be done to improve student learning.
- What can be done to improve teaching (or student service implementation).
- Priorities for those improvements.
- A timeline for how to implement those improvements.
  This discussion is a critical component to make the assessment process meaningful and authentic!

4. After the discussion, the department chair completes the Departmental Assessment Analysis form that summarizes the results of the dialogue at the meeting. No names are attached to this summary.
- What types of assessment methods were used?
- What were the results?
- What does the department think it can do to improve teaching and learning?
- What help or resources are needed from the college to improve teaching and learning?
- What are its top priorities for improvement?
- How will it implement those priorities and what kind of timeline will it use for that implementation?

5. The department chair submits the Assessment Analysis form. The forms are made available on the Assessment and SLO webpage at Sierra College. The forms may be used to help write the department's program review.

Integrating Assessment Activities

Assessment activities are linked to a variety of ongoing and systematic processes at Sierra College-
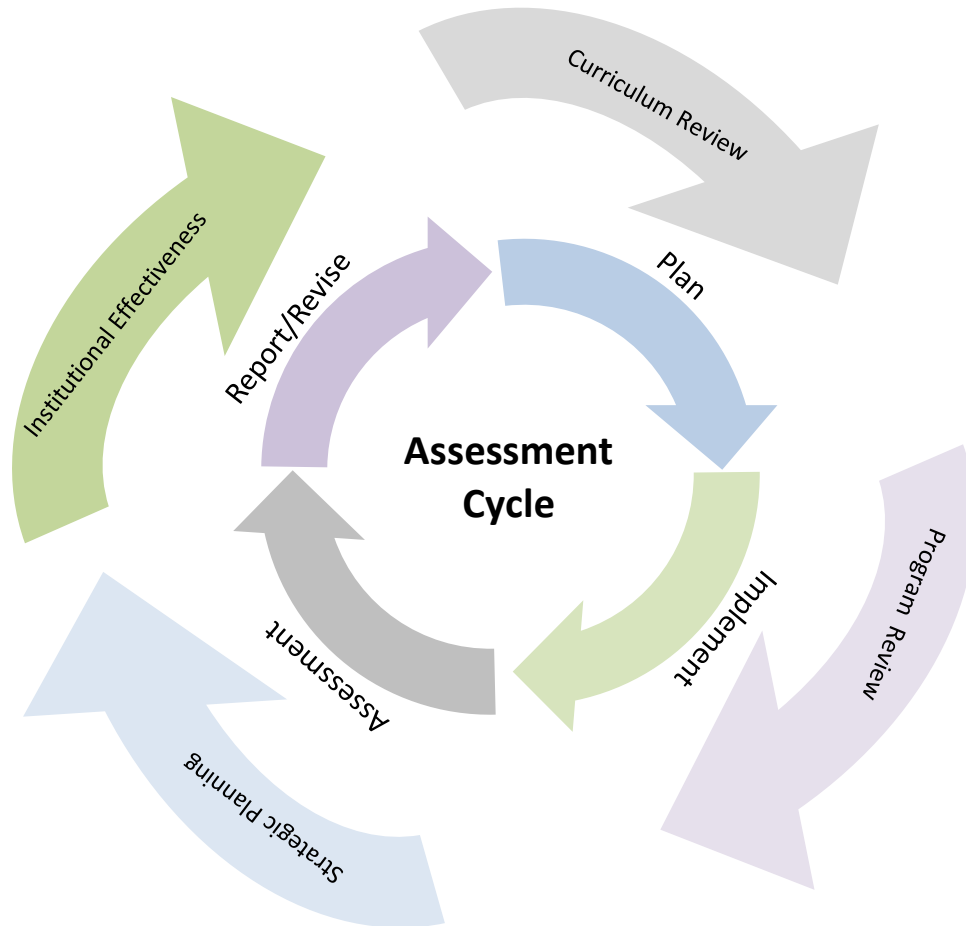
SLOs and Curriculum

Curriculum and student learning outcomes are closely connected. The curriculum process follows a 6 year cycle. New courses and existing courses with revisions will complete steps to identify outcomes in the curriculum process in order to receive approval from the curriculum committee.

Outcomes and objectives will reside in the Course Outline of Record (COR).

SLOs and Program Review

Sierra College uses the Program Review process to evaluate educational effectiveness in a 3 year cycle. Assessment activities contribute to the narrative analyzing student learning and department quality. Aggregated reports provide a launch pad for discussion to address improvement and to celebrate achievement within departments.

Assessment and Academic Freedom

Some institutions experience hostile environments in opposition to assessment activities. The prevailing question--- Does this process affect my academic freedom? Sierra College is committed to an assessment process that will not undermine or impinge on academic freedom.

Nothing inherent in the Outcomes Assessment process interferes or violates the academic freedom of the instructor. Assessing outcomes is simply about faculty determining whether students are learning those things they deem most important, and then using the information to make changes where appropriate. Nothing in the process dictates in any way how faculty choose to deliver the course content or how they grade their students. Requiring faculty, every few semesters, to assess three core course outcomes is far less proscriptive than asking faculty to use a common text, a common requirement in higher education that is generally accepted by faculty as reasonable. (Montgomery College, 2009)

"... individual students or faculty are not the point of emphasis, nor is the goal to seek out problems and assign blame. Rather, the overarching goal is to identify program strengths and areas of concern and to use insights gleaned through the assessment process to inform discussions about pedagogical or curricular changes" (UCLA, 2009).

SLO Reflection and Closing the Loop

Once you've written the outcomes and you've assessed the outcomes, the final steps are the most important in the continuous cycle of assessment. Review the results, determine what needs to take place based on your findings and create a plan for improvement. When you've articulated your plan, the cycle starts all over.

Analyzing and planning doesn't have to be an individual task. Robust assessment practices are often a collaborative process. Analyzing in teams may help to see patterns and pose new questions. Interpreting the results may create dialogue in departments. Following your discussion, action plans may be created. In some cases, no action may be needed. ACCJC requires documentation of the final steps in the assessment cycle. Department chairs should aggregate results, facilitate dialogue and document activities. Chairs keep track of decisions, process, and procedures using the Departmental Assessment Analysis form. Course assessment results are to remain anonymous. In the event a single course is taught by only one instructor, the instructor may choose to retain assessment results unless requested by ACCJC. All faculty and staff should be reminded that assessment results are never used punitively.

Using the Student Learning Assessment Summary (SLAS Form)
The SLAS form should guide your process of analyzing results. The form covers a few questions and additional questions are listed below to help generate discussion during Planning and Assessment Day-

<u>How did the results meet the criteria for assessment?</u>
Sierra College has adopted the following institutionally shared outcome assessment criteria:

Unsatisfactory	Proficient	Mastery
The student displays need for improvement in knowledge, skills, and/or abilities.	The student displays competency in knowledge, skills, and/or abilities.	The student displays expertise in knowledge, skills, and/or abilities.

Individual instructors determine what counts as "Mastery," "Proficient," and "Unsatisfactory." For example:

> Mastery = earned assessment score of 8-10 points
> Proficiency = earned assessment score of 6-7 points
> Unsatisfactory = earned assessment score of less than 6 points

<u>Describe the results?</u>
What did you learn? What happened? What did you notice? Any highlights? How is this evidence related to my teaching?

<u>How will you improve (if needed)?</u>
What can you share about your success? What impact will this have on students?

<u>What actions will you take?</u>
What about next time?

Don't forget, part of the process should include assessing the assessment. For example, should questions on the exam be revised? Could rubrics be improved? Is EAC (easily attained criteria) an issue? Is our assessment criterion set at a level that will always be reached?

Closing the loop only occurs once we've reflected on the entire process, determined a path forward and implemented the action plan.

The SLAS results will live in the course management system (TracDat/Improve).

Gathering Evidence

Instructional evidence gathering tips-

"One important distinction in assessment methods is between techniques that directly determine whether students have mastered the content of their academic programs and those that ask students to reflect on their learning" (Palomba & Banta, as cited in UMass, 2001).

Many educators utilize direct methods of assessment to measure outcome achievement. At the course level, direct measures may include tests, exams, classroom assessment techniques (CATs), or assignments. At the program level, direct measures may include final projects, capstones, portfolios, standardized tests, or licensure exams. Indirect approaches measure students' self-perceptions of their learning and perspectives on program content or academic services. At the institutional level, students may participate in campus climate surveys and exit interviews.

According to UCLA, "Today, the most powerful components of educational effectiveness within undergraduate teaching and learning are: (a) thoughtfully constructed direct *and* indirect measures of student learning that are (b) assessed by program faculty as a collective body of evidence pertaining to educational effectiveness and considered for purposes of curricular review and development" (UCLA, 2009).

We encourage using indirect and direct methods to gather evidence. Saving samples of the types of methods used will contribute to the larger discussion of educational quality, effectiveness and improvement. Since the purpose of all assessment is to improve educational effectiveness, it is advised that assessment be completed at different intervals. Formative assessments are those undertaken while learning is taking place and is designed to influence teaching and improve learning. Summative assessments are those obtained at the end of a course or program that result in a final judgment about a student's performance. Whether you use a CAT at the end of a lecture (formative) or a final exam (summative) both contain helpful information about outcome achievement.

An example of one way to gather evidence from the Office of Academic Planning and Assessment Handbook from University of Massachusetts-

Minute Paper Example (direct, formative assessment)

Concerned that his students may not understand the importance of multiple points within his introductory statistics lectures, this instructor took several minutes at the end of each class to ask the following question:

"What are the five most important points from this session?"

"What one or two questions still remain in your mind?"

The students were given five minutes to write. The instructor collected the responses and read them through, making a list of "important points" and "important questions" and tallying how often each item was repeated.

Results-

Many points that students listed as "important" the instructor felt were simply details. Students came up with as many as 20 different important points from the same lecture. Some students mentioned points that he had not even brought up in the lecture at all.

The next day, the instructor listed the 10 or 12 most common responses on the board before class. He began class by explaining the relative importance of each point and their relationship to each other. He also told them which points were not related and used the discussion to answer several of

the important questions that had been raised in the minute papers. After a month of using the minute paper at the end of each class, with a feedback session at the start of the next, the average number of different "important points" dropped from 20 to 8. Repeated use of the minute paper helped his students learn to listen more carefully and helped him realize the importance of being explicit in his lectures. (Adapted from Angelo & Cross, Classroom Assessment Techniques as cited in University of Massachusetts, 2001, p.33)

Why can't I just use grades to assess learning?
Whereas course grades describe how well students performed overall, assessment results provide detailed and descriptive information about how well students achieve specific student learning outcomes (James Madison University, 2014). Since overall course grades do not identify specific areas of knowledge or skills associated with the learning goals of the course, they are not as useful as outcomes in identifying where students learning is meeting expectations and where student learning can be improved. Outcome assessment provides educators with detailed evidence of student learning so that, if needed, specific improvement plans can be implemented.

UCLA addressed this issue in their Student Learning Outcomes Guidelines, "Assigning grades in individual courses is still important, but no longer endorsed by accrediting agencies as sufficient independent evidence of learning quality. The availability of other, direct types of evidence is critical" (2009, p.6-7).

Student Services (non-instructional) evidence gathering tips-

Gathering evidence should move beyond asking about student satisfaction with services and include efforts to ask more difficult questions to assess what was gained or learned from the experience. Consider assessing learning that results from leadership experiences, athletics participation, club involvement and other campus activities.

According to the National Institute for Learning Outcomes Assessment, "Compiling and synthesizing the results from these various assessments can provide useful information to the institution, the student, and the public through a broader perspective on the entire student learning experience" (p.8)

SLOs Defined

Sierra College

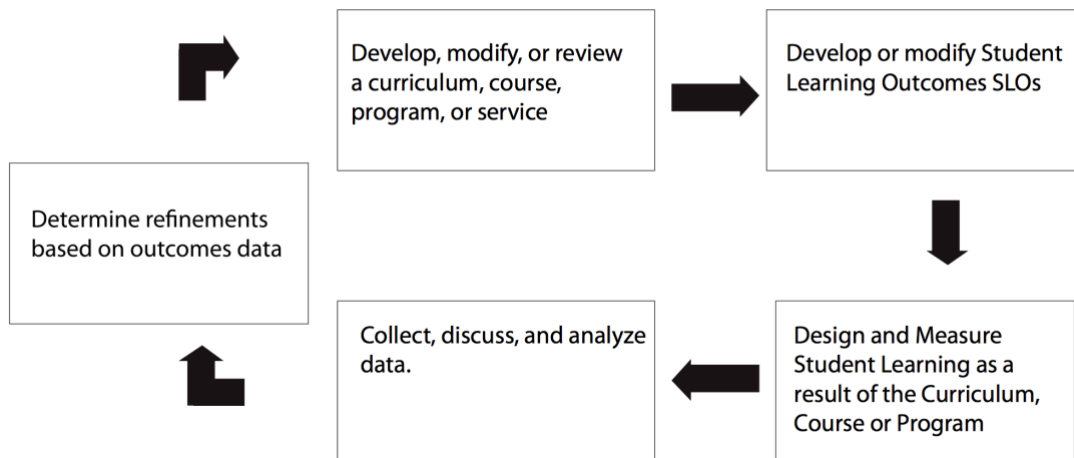## SLO Terminology Glossary[1]

as defined by The ASCCC

Alignment. Alignment is the process of analyzing how explicit criteria line up or build upon one another within a particular learning pathway. When dealing with outcomes and assessment, it is important to determine that course outcomes align or match up with program outcomes; that align with institutional outcomes that align with the college mission and vision. Alignment means the system is consistent. In student services, alignment of services includes things like aligning financial aid deadlines and instructional calendars.

Artifact. An assessment artifact is a student-produced product or performance used as evidence for assessment.

Assessment. A process or tool that aims to improve the quality of instruction and improve student learning.

Assessment Cycle. The assessment cycle refers to the process called closing the loop and is figuratively represented below.

Closing the Assessment Loop

Develop, modify, or review a curriculum, course, program, or service

Develop or modify Student Learning Outcomes SLOs

Determine refinements based on outcomes data

Collect, discuss, and analyze data.

Design and Measure Student Learning as a result of the Curriculum, Course or Program

Assessment of Learning. Learning assessment refers to a process where methods are used to generate and collect data for evaluation of courses and programs to improve educational quality and student learning. This term refers to any method used to gather evidence and evaluate quality and may include both quantitative and qualitative data in instruction or student services.

Authentic Assessment. Traditional assessment sometimes relies on indirect or proxy items such as multiple choice questions focusing on content or facts. In contrast, authentic assessment simulates a real world

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[1]The Academic Senate for California Community Colleges. (2009, Fall). *SLO Terminology Glossary- A Resource for Local Senates.* Retrieved from ASCCC.org: http://www.asccc.org/papers/slo-terminology-glossary-resource-local-senates. Modified 2014.

experience by evaluating the student's ability to apply critical thinking and knowledge or to perform tasks that may approximate those found in the work place or other venues outside of the classroom setting.

Bloom's Taxonomy. Bloom's Taxonomy is an example of one of several classification methodologies used to describe increasing complexity or intellectual sophistication: Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation.

Classroom assessment techniques. Classroom assessment techniques (CATs) are "simple tools for collecting data on student learning in order to improve it" (Angelo & Cross, 1993, p. 26). CATs are short, flexible, classroom techniques that provide rapid, informative feedback to improve classroom dynamics by monitoring learning, from the student's perspective, throughout the semester.

Closing the Loop. Closing the loop refers to the use of assessment results to improve student learning through collegial dialog informed by the results of student service or instructional learning outcome assessment. It is part of the continuous cycle of collecting assessment results, evaluating them, using the evaluations to identify actions that will improve student learning, implementing those actions, and then cycling back to collecting assessment results, etc.

Course Assessment. This assessment evaluates the curriculum as designed, taught, and learned. It involves the collection of data aimed at measuring successful learning in the individual course and improving instruction with the ultimate goal towards improving learning and pedagogical practice.

Culture of evidence. The phrase "culture of evidence" refers to an institutional culture that supports and integrates research, data analysis, evaluation, and planned change as a result of assessment to inform decision-making (Pacheco, 1999). A culture of evidence is characterized by the generation, analysis and valuing of quantitative and qualitative data in decision making.

Curriculum Mapping. According to University of Missouri, Kansas City, "Curriculum mapping is a method to align instruction with desired goals and program outcomes. It is a process that keeps track of what is taught and how. The map or matrix becomes a tool that:

- Documents what is taught and when
- Reveals gaps in the curriculum
- Helps design an assessment plan

Benefits:

- Improves communication among faculty
- Improves program coherence
- Increases the likelihood that students achieve program-level outcomes
- Encourages reflective practice

A curriculum map is a table with one column for each learning outcome and one row for each course or required event/experience (or vice versa: each row contains a course and each column lists a learning outcome)" (Lindsay, 2013, p.1).

EXCERPT FROM A HYPOTHETICAL BIOLOGY PROGRAM CURRICULUM MATRIX

Key: "I"=Introduced; "R"=reinforced and opportunity to practice; "M"=mastery at the senior or exit level; "A"=assessment evidence collected

Courses	Intended Student Learning Outcomes			
	Apply the scientific method	Develop laboratory techniques	Diagram and explain major cellular processes	Awareness of careers and job opportunities in biological sciences
BIOL 101	I	I		I
BIOL 202	R	R	I	
BIOL 303	R	M, A	R	
BIOL 404	M, A		M, A	R
Other: Exit interview				

(Lindsay, 2013, p.1)

Direct data. Direct data provide evidence of student knowledge, skills, or attitudes for the specific domain in question and actually measuring student learning, not perceptions of learning or secondary evidence of learning, such as a degree or certificate. For instance, a math test directly measures a student's proficiency in math. In contrast, an employer's report about student abilities in math or a report on the number of math degrees awarded would be indirect data.

Embedded assessment. Embedded assessment occurs within the regular class or curricular activity. Class assignments linked to student learning outcomes through primary trait analysis serve as grading and assessment instruments (i.e., common test questions, CATs, projects or writing assignments). Specific questions can be embedded on exams in classes across courses, departments, programs, or the institution. Embedded assessment can provide formative information for pedagogical improvement and student learning needs.

Evidence. Evidence is artifacts or objects produced that demonstrate and support conclusions, including data, portfolios showing growth, as opposed to intuition, belief, or anecdotes. "Good evidence, then, is obviously related to the questions the college has investigated and it can be replicated, making it reliable. Good evidence is representative of what is, not just an isolated case, and it is information upon which an institution can take action to improve. It is, in short, relevant, verifiable, representative, and actionable."

Formative assessment. Formative assessment is a diagnostic tool implemented during the instructional process that generates useful feedback for student development and improvement. The purpose is to provide an opportunity to perform and receive guidance (such as in class assignments, quizzes, discussion, lab activities, etc.) that will improve or shape a final performance. This stands in contrast to summative assessment where the final result is a verdict and the participant may never receive feedback for improvement such as on a standardized test or licensing exam or a final exam.

Grades. Grades are the faculty evaluation of a student's performance in a *class* as a whole. Grades represent an overall assessment of student class work, which sometimes involves factors unrelated to specific outcomes or student knowledge, values or abilities. For this reason equating grades to SLO assessment must be done carefully. Successful course completion is indicated by a C or better in California Community College data, such as that reported in the Accountability Report for Community Colleges (ARCC).

Indirect data. Indirect data are sometimes called secondary data because they indirectly measure student performance. For instance, certificate or degree completion data provide indirect evidence of student learning but do not directly indicate what a student actually learned.

Objectives. Objectives are small steps that lead toward a goal, for instance the discrete course content that faculty cover within a discipline. Objectives are usually more numerous and create a framework for the overarching student learning outcomes which address synthesizing, evaluating and analyzing many of the objectives.

Program. In Title 5 §55000(g), a "Program" is defined as a cohesive set of courses that result in a certificate or degree. However, in Program Review, colleges often define programs to include specific disciplines. A program may refer to student service programs and administrative units, as well.

Rubric. A rubric is a set of criteria used to determine scoring for an assignment, performance, or product. Rubrics may be holistic, not based upon strict numerical values which provide general guidance. Other rubrics are analytical, assigning specific scoring point values for each criterion often as a matrix of primary traits on one axis and rating scales of performance on the other axis. A rubric can improve the consistency and accuracy of assessments conducted across multiple settings.

Student Learning Outcomes (SLO). Student learning outcomes (SLOs) are the specific observable or measurable results that are expected subsequent to a learning experience. These outcomes may involve knowledge (cognitive), skills (behavioral), or attitudes (affective) that provide evidence that learning has occurred as a result of a specified course, program activity, or process. An SLO refers to an overarching outcome for a course, program, degree or certificate, or student services area (such as the library). SLOs describe a student's ability to synthesize many discreet skills using higher level thinking skills and to produce something that asks them to apply what they've learned. SLOs usually encompass a gathering together of smaller discrete objectives (see definition on previous page) through analysis, evaluation and synthesis into more sophisticated skills and abilities.

Student Learning Outcomes Mapping and Planning Spreadsheet (SLO MPS). The SLO Planning and Mapping Spreadsheet allows programs to effectively identify and revise SLOs for all courses and programs. This form also allows for the mapping of SLOs and documenting assessment schedules.

Summative assessment. A summative assessment is a final determination of knowledge, skills, and abilities. This could be exemplified by exit or licensing exams, senior recitals, capstone projects or any final evaluation which is not created to provide feedback for improvement, but is used for final judgments.

Student Learning Outcomes

"SLOs are the intended learning outcomes of a course or program; objectives are the things that must be taught/covered in order to achieve those learning outcomes. Sometimes, these things are very close; often, they are quite distinct" (ACCJC, 2009).

Learning Outcomes describe:

What faculty and staff members want students to *know at the end of a course, program or service experience.*

What faculty and staff members want students *to be able to do* at the end of the course, degree program or student service experience.

Learning outcomes have three major characteristics:

1. They specify learning that is ***observable***

2. They specify learning that is ***measurable***

3. They specify learning that is completed by the ***students/learners*** (rather than the faculty members)

Student learning outcome statements should possess all three of these characteristics so that they can be assessed effectively (Suskie, 2004). Some instructors make a list of the major assignments in the class or review the course objectives and then try to describe in one sentence what the students are being asked to demonstrate. Try using this approach when writing your SLOs. Think big picture rather than nuts and bolts.

When stating student learning outcomes, it is important to use verbs that describe exactly what the learner(s) will be able to *know* or *do* upon completion of the course, degree or program. See the SLO Rubric on page 43 of this guidebook to help craft SLOs.

Use Bloom's Taxonomy (1964) when writing your learning outcomes. Another version of the taxonomy was updated in the 1990s. The change from nouns to verbs may help you as you write your outcomes. Below the taxonomies are merged.

Level	Cognitive Behaviors
1. Knowledge/Remembering	to know specific facts, terms, concepts, principles, or theories, list, define
2. Comprehension/Understanding	to describe, classify, explain, discuss, recognize
3. Application/Applying	to apply knowledge to new situations, to solve problems, demonstrate, use, write
4. Analysis/Analyzing	to identify the organizational structure of something; to identify parts, relationships, and organizing principles, compare, contrast, differentiate, examine
5. Synthesis/Evaluating	to appraise, argue, defend, judge, evaluate
6. Evaluation/creating	to assemble, construct, create, formulate, design

Questions to consider when writing outcomes:

Remembering: can the student recall or remember the information?
Understanding: can the student explain ideas or concepts?
Applying: can the student use the information in a new way?
Analyzing: can the student distinguish between the different parts?
Evaluating: can the student justify a stand or decision?
Creating: can the student create a new product or construct a point of view?

Adapted from Atlantic College, Assessment Handbook, 2009, and OAPA Handbook UMasss (2001).

Concrete verbs such as "define," "argue," or "create" are more helpful for assessment than vague verbs such as "know," "understand" or passive verbs such as "be exposed to." Some examples of action words frequently used in objectives are included in the table below.

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
define	classify	apply	analyze	arrange	appraise
identify	describe	compute	appraise	assemble	assess
indicate	discuss	construct	calculate	collect	choose
know	explain	demonstrate	categorize	compose	compare
label	express	dramatize	compare	construct	contrast
list	identify	employ	contrast	create	decide
memorize	locate	give examples	criticize	design	estimate
name	paraphrase	illustrate	debate	formulate	evaluate
recall	recognize	interpret	determine	manage	grade
record	report	investigate	diagram	organize	judge
relate	restate	operate	differentiate	perform	measure
repeat	review	organize	distinguish	plan	rate
select	suggest	practice	examine	prepare	revise
underline	summarize	predict	experiment	produce	score
	tell	schedule	inspect	propose	select
	translate	shop	inventory	set-up	value
		sketch	question		
		translate	relate		
		use	solve		

Outcomes versus Objectives---A brief history

Benjamin Bloom and education psychologists developed a classification to understand the learning process-- Bloom's Taxonomy of Educational Objectives (1956). In 2001, a revised taxonomy reflected a change in terminology from nouns to verbs associated with each level and a reordering from lower order to higher order thinking skills-- A Taxonomy for Teaching, Learning and Assessment. Note the revised name change moved away from the use of "objectives" to a more dynamic classification.

However, Title V continued to use "objective" in the Standards and Criteria for Courses (section 55002).

> (3) Course Outline of Record. The course is described in a course outline of record that shall be maintained in the official college files and made available to each instructor. The course outline of record shall specify the unit value the expected number of contact hours for the course as a whole, the prerequisites, co-requisites or advisories on recommended preparation (if any) for the course, the catalog description, objectives, and content in terms of a specific body of knowledge. The course outline shall also specify types or provide examples of required reading and writing assignments, other outside-of-class assignments, instructional methodology, and methods of evaluation for determining whether the stated objectives have been met by students.

> (4) Conduct of Course. Each section of the course is to be taught by a qualified instructor in accordance with a set of objectives and with other specifications defined in the course outline of record.

The Academic Senate for California Community Colleges addressed this issue in their literature.

> "One important aspect of assessment that has caused confusion in some instances is a matter of definition: the distinction between "outcomes" and "objectives." These terms have been used interchangeably on some campuses and in Title 5 and documents from the Accrediting Commission for Community and Junior Colleges (ACCJC) have sometimes added to the confusion on this issue. The 2002 standards of the ACCJC require that "learning objectives" be included in course syllabi: "In every class section students receive a course syllabus that specifies learning objectives consistent with those in the institution's officially approved course outline" (II.A.6, emphasis added). Despite the specific language used in the standards, most colleges interpreted that the ACCJC intended this statement to refer to student learning outcomes, and indeed the ACCJC itself subsequently corrected the term "objectives" to read "outcomes." This conflation of terms has produced confusion regarding accreditation requirements and debate concerning the application of both terms."

Even the ASCCC admitted to adding to the confusion. From 2004 to 2010 they used the terms without a clear distinction. The most current terminology glossary attempts to define the terms.

Objectives- The discrete course content that faculty cover within a discipline. Objectives are usually more numerous and create a framework for the overarching student learning outcomes which address synthesizing, evaluating and analyzing many of the objectives. (ASCCC, 2010, p. 10)

Outcomes- Student learning outcomes (SLOs) are the specific observable or measurable results that are expected subsequent to a learning experience. SLOs usually encompass a gathering together of

smaller discrete objectives through analysis, evaluation and synthesis into more sophisticated skills and abilities. (ASCCC, 2010, p. 13)

More recently, emphasis has shifted from ***instructional objectives***, which describe what instructors do and the content of material presented during classroom instruction, to ***student learning outcomes***, which describe what students can do as a result of their educational experiences. Many institutions still use the term objective interchangeably with outcome, while others maintain a distinction. ACCJC is specifying that colleges assess outcomes and this leaves no room for debate on the differences between the two. Sierra College must comply to standards to maintain accreditation. Objectives need to be included in the curriculum review process. Outcomes need to be included in the assessment process. As a reminder, and best stated by ASCCC---"certainly the most important aspect of SLO assessment is not the terminology employed but rather the results achieved through the assessment process."

What this means at Sierra College?
Faculty will continue to see the terms "objectives" and "outcomes" in use.

When developing curriculum, objectives are important to establish a framework for planning and delivering instruction. Objectives identify purpose and help clarify expectations. In the curriculum process at Sierra College, objectives are listed in the course outline of record (COR) and must be reviewed and approved by the curriculum committee. The objectives focus largely on what is taught (course content). All course objectives are available through WebCMS. Most likely, instructors assess objectives all the time. Outcomes will describe what students can do as a result of working through the course objectives. Outcomes reflect the desired change in students resulting from a particular set of course activities. A current list of program (PSLOs) and course (CSLOs) outcomes can be found on the Sierra College website and on Form G of the COR. Contact your department chair for help accessing this information.

Outcomes and objectives may be quite similar and at other times the differences may be very distinct. It is important that "outcomes" are published on all course syllabi.

Here are some examples:

English 1A **objectives**-
The student will produce an introductory paragraph with a thesis.
The student will support claims with evidence.
The students will use MLA citation to support those claims.

English 1A sample **outcome**-
Student will write essays, including research-based writing, demonstrating academic rhetorical strategies, documentation of resources, and critical analysis.

Business120 **objectives**-
Compare and contrast the marketing concept and the selling concept.
Prepare and analyze probing questions for each of the four elements of the marketing mix.
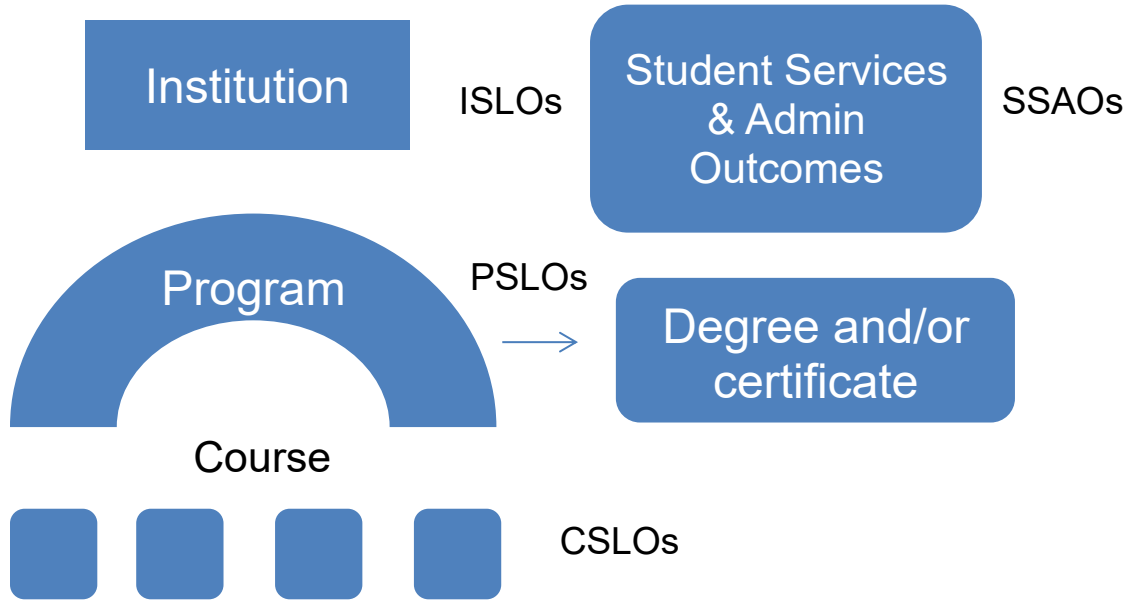Create a written marketing research plan to identify the target market and explain how that business effectively communicates with those consumers.

Business 120 sample **outcome**-
Student will develop and present a marketing plan.

Categories of SLOs

Sierra College assesses four types of outcomes: ISLOs, PSLOs, CSLOs and SSAOs

| Institution | ISLOs | Student Services & Admin Outcomes | SSAOs |

Program — PSLOs → Degree and/or certificate

Course — CSLOs

The general education program at Sierra College provides the opportunity for students to develop the intellectual skills, information technology facility, affective and creative capabilities, social attitudes and appreciation for cultural diversity that will make students effective learners and citizens. General education outcomes are defined at the course level and align with Institutional Student Learning Outcomes (ISLOs). Essentially when we assess at the course level, we are assessing our general education outcomes and institutional outcomes simultaneously.

Institutional Learning Outcomes- ISLOs

Outcomes that encompass the whole student experience. The specific observable or measurable results that are expected subsequent to the overall learning experience at the institution.

Communication-

Read – Use active reading skills to comprehend and interpret information and ideas from a variety of texts, including academic prose (such as textbooks, literature, primary and secondary sources, and scholarly journals), technical documentation (such as manuals, charts, graphs, and reports), and media sources (such as newspapers, magazines, websites and online databases).

Write – Communicate thoughts, ideas, and information effectively in writing in a variety of modes and for a variety of purposes. Accurately and persuasively convey information and ideas using logic, reasoning, and effective rhetorical strategies. Use correct grammar, spelling, punctuation, diction, style, and format.

Listen – Demonstrate active listening skills in classroom, community, personal, and professional situations. Interpret and respond appropriately to verbal and nonverbal communication in a variety of contexts.

Dialogue –Interact in a variety of dynamic situations by assessing the needs of the audience, creating a message, adapting to audience feedback, and responding appropriately. Through dialogue, build mutual understanding with individuals from various backgrounds.

Technology & Information Competency-

Demonstrate Technical Literacy – Efficiently and accurately use current computer and other relevant technologies to acquire, process, and present information. Organize and maintain records.

Apply Technology – Use computer applications and other technologies in the learning process, real-world scenarios, and the workplace. Adapt to new or developing technologies.

Access Information – Recognize the need for information; choose and narrow topic. Formulate search questions. Gather, organize, and discriminate among various sources of information.

Evaluate and Examine Information — Filter information for relevance and accuracy. Apply criteria to determine credibility. Utilize data gathered to draw conclusions. Construct meaning from expanding and conflicting information. Credit sources according to academic standards.

Critical & Creative Thinking-   Citizenship-

Inquire – Identify and understand questions or problems across disciplines and in practical applications. Develop hypotheses.	**Ethics** – Develop and apply ethical reasoning and decision making skills in academics, in the workplace, and in global and local communities. Value honesty, civility, empathy, interpersonal competence, social responsibility, and peaceful conflict resolution.
Analyze – Investigate and assess the validity or relevance of arguments, claims, or contentions supported by data, observation, experience, testing or analysis. Distinguish fact from opinion. Develop an interpretation with an awareness of different views and reasoning.	**Diversity** – Recognize, understand, and respect diversity of belief, culture, value, ability, gender, race, age, and sexual orientation.
Problem Solve – Use sound reasoning to specify solutions and consequences. Test hypotheses using methods appropriate to the problem (such as the scientific method, mathematical reasoning, and principles of logic).	**Sustainability/Global Awareness** – Develop values and behaviors that respect the natural environment. Evaluate social justice issues and identify social responsibilities to elicit social change. Recognize the ethical implications of political, social, and economic institutions.
Express – Acquire an appreciation and involvement in the creation or performance of works of fine art, craft, music, drama, and/or culture. Participate in games, sports, dance, and outdoor pursuits based on individual interests and capabilities.	**Personal Responsibility** – Accept personal responsibility by recognizing oneself as the principal cause for opportunities and experiences. Effectively develop, apply and manage a healthy physical lifestyle and emotional well-being; Self-motivate through planning and acting to accomplish goals. Recognize the value of life-long learning.

Statements that describe what students will know and be able to do when they complete a degree, certificate or a program. The specific observable or measurable results that are expected subsequent to a learning experience in a program.

Examples of Program Outcomes for History (a program/department with a single degree)
1. Incorporate evidence derived from primary and secondary sources to support a thesis.
2. Evaluate historical evidence for bias and for relevance to major historical issues and controversies.
3. Identify change over time, cross-cultural connections, and links between past and present.

Example of Program Outcomes for Business Administration (a program/department with multiple degrees and certificates)
1. Meet the requirements for successful transfer to a UC/CSU program in Business Economics and/or Business Administration.
2. Analyze the external environment of business as a means of assessing the threats and opportunities confronting businesses in the 21st century.
3. Define, analyze and devise solutions for complex business problems and issues by using logical reasoning patterns.
4. Demonstrate a comprehension of business ethics.

Example of Program Outcomes for Business Administration—Emphasis in Entrepreneurship
1. Access and interpret information (legal, financial, operational, market) necessary to develop a new business venture.
2. Assess the risks associated with developing a new business venture.
3. Develop a market ready business plan.

Adapted from Santa Barbara City College, 2014

Course Outcomes- CSLOs
Statements describing the knowledge, skills and abilities that a student will be able to demonstrate at the end of a course. The specific observable or measurable results that are expected subsequent to a learning experience in a course.

Example of Course Outcome for a Music course
  1. Critique the characteristics of music from other cultures.

Example of a Course Outcome for a Small Business course
  1. Compare alternatives for small business advertising and construct an advertising plan.

Student Service and Administrative Area Outcomes- SSAOs

Include all events that occur outside of the classroom that complement the academic programs and enhance the overall student experience. The specific observable or measurable results that are expected subsequent to the experiences from student services.

Planning and Assessment Day Facilitator's Worksheet

Each Flex Week the District has scheduled a Planning & Assessment Day. Per Article 21 of the SCFA Contract Department Chairs are to organize and facilitate Planning & Assessment activities. The following worksheet is a guide to assist programs use SLO assessment to improve learning, close equity gaps in learning, and to meet the College's SLO requirements.

What to do? The Basics:

☐ Review SLO Spreadsheet to monitor and plan during the 3-year assessment cycle.

☐ Report/Reflect on SLO achievement results using Student Learning Assessment Summary (SLAS) form.

☐ Complete the Departmental Assessment Analysis (DAA) form.

☐ Upload SLAS and DAA forms to your program folder in the MS Teams area by census date.

_____

I. Assessment Cycle and ACCJC Standards- To meet Accreditation Standards all courses and programs at Sierra College must be assessed within the 3-year cycle.

A. ACCJC, Standard II. A. 1., "The institution identifies and regularly assesses learning outcomes for courses, programs, certificates and degree using established institutional procedures."

B. To facilitate a regular assessment cycle, the College uses the following three forms. (1) SLO Spreadsheet, (2) SLAS form, (2) DAA form.

C. The following sections of the Facilitator's Worksheet describes how the forms and process help make SLO assessment a meaningful tool to gather evidence of student learning in order to improve it.

II. Review SLO Spreadsheets-

A. Check for accuracy (Are all active course listed? Are course/program outcomes accurate?)

B. Review course and program outcomes (Do they describe clear and measurable knowledge and/or skills that we expect students to achieve as a result of learning?)
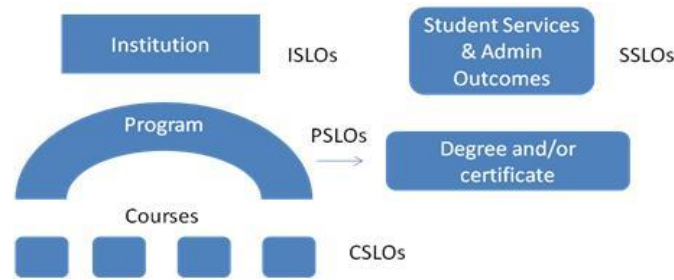
C. Alignment (do CSLOs accurately align to PSLOs? Do PSLOs align to ISLOs?)

D. Degree outcomes? (must include if different than program outcomes)

F. Assign upcoming assessments to ensure meeting 3-year assessment requirements. Mark "P" for planned assessments and "C" for completed assessments.

G. SLO Spreadsheets can be directly edited in the SLO Assessment Teams area.

III. Report and Reflect: Assessment Summary   **Student Learning (SLAS) form.**

A. The purpose of the SLAS form is to report and reflect upon the results of your CSLO and/or PSLO assessments.

B. Based upon achievement results, discuss which elements of instruction supported outcome achievement and/or identify opportunities to improve instructional design to increase outcome achievement.

- Are there ample opportunities for students to practice demonstrating the knowledge and/or abilities described in the SLO?
- Does the instructional material, learning activities (discussions, labs, assignments, etc.) align to and support achievement expectations described in the course SLO?
- Do assignments include assessment/grading rubrics to help learners understand the criteria and performance ratings for outcome achievement?
- Do the results identify specific learning strengths and/or weaknesses related to the SLO?

C. Review outcome description

- Do SLOs describe clear and measurable knowledge and/or abilities that result from learning in the course/program?
- Is the method used to demonstrate outcome achievement fair for all students or does the method expect skills/abilities not taught in the course?
- Do the results indicate anything about the course/program curriculum?
- Do the results indicate a need for faculty professional development opportunities?

IV. Departmental Assessment Analysis (DAA) form. This form closes the assessment loop and captures the meaning of the assessment for the program.

A. Using outcome achievement results, what does the department think it can do to improve teaching and learning?

B. What help or resources are needed from the college to improve teaching and learning?

C. What are top priorities for improvement?

D. How will department implement those priorities?
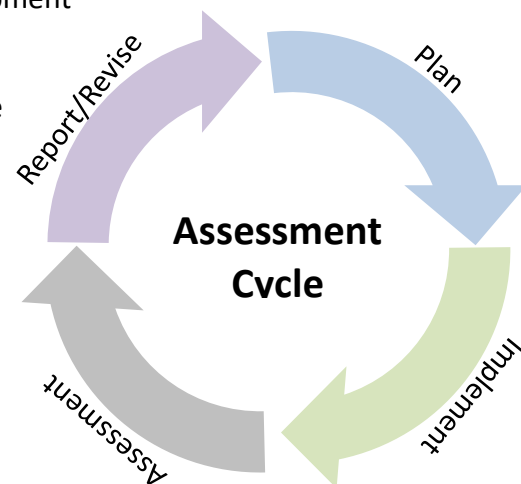
E. Provide timeline.

F. Review previous or ongoing actions or improvement plans. Were goals met? Did changes lead to improvement in learning? Evidence of improvement. (Refer to previous semester's DAA form).

V. Upload completed SLO documents (SLAS and DAA forms) to Assessment Teams by census date.

SIERRA COLLEGE

Student Learning Assessment Summary

(SLAS form)

Instructions:

- Using an assessment complete the following form for each CSLO/PSLO assessed.
- Submit all forms anonymously to your department chair before the Planning & Assessment Day.

Program/Degree/ Certificate:	
Course Number and Title:	
Course or Program Student Learning Outcome Assessed:	
Assessment Method: (identify and describe the assessment method)	Choose from the following:

A. Demonstration B. Course Test/Quiz C. Standardized Exam D. Exit Interview E. Group Activity F. PreTest/PostTest G. Survey	H. Project I. Field Placement/ Internship J. Laboratory Project K. Portfolio Review L. Presentation/ Performance M. Paper, writing assignment N. Other

Method Description:

Criteria for Assessment: (institutionally shared outcome assessment criteria)	Unsatisfactory The student displays need for improvement in knowledge, skills, and/or abilities.	Proficient The student displays competency in knowledge, skills, and/or abilities.	Mastery The student displays expertise in knowledge, skills, and/or abilities.
Results: (record results of assessment)	_____ # of sections assessed _____ # of students assessed		
	Results Description (optional): _____ Date of results		
	Criteria Results (# of students): _____ Unsatisfactory _____ Proficient _____ Mastery		
Results Analysis: (what did you learn?)			
Actions: (how will you improve, if needed?)	 _____ Date of planned action		
	☐ YES or ☐ NO The actions (above) correlate to a new or existing resource request? If yes, identify the request(s) below:		

SIERRA COLLEGE

Student Learning Assessment Summary

SAMPLE (SLAS form)

Instructions:

- Using an assessment complete the following form for each CSLO/PSLO assessed.
- Submit all forms anonymously to your department chair before the Planning & Assessment Day.

Program/Degree/ Certificate:	PHILOSOPHY	
Course Number and Title:	PHILOSOPHY 4 – INTRODUCTION TO CRITICAL THINKING	
Course or Program Student Learning Outcome Assessed:	CSLO 2 – Recognize and differentiate common logical errors or fallacies.	
Assessment Method: (identify and describe the assessment method)	Choose from the following: AA. writing assignment	
	O. Demonstration P. Course Test/Quiz Q. Standardized Exam R. Exit Interview S. Group Activity T. PreTest/PostTest U. Survey	V. Project W. Field Placement/ Internship X. Laboratory Project Y. Portfolio Review Z. Presentation/ Performance AA. Paper, writing assignment BB. Other
	Method Description: Discussion board writing assignment requiring students to recognize and differentiate between Strawman and Red Herring fallacies. (1) Define the Strawman and Red Herring fallacy. (2) Create two arguments that identify its premises and conclusions - one argument that contains a Strawman fallacy and one that contains a Red Herring fallacy. (3) Explain precisely where the fallacy occurs in each argument and what causes it to be a fallacy.	

Criteria for Assessment: (institutionally shared outcome assessment criteria)	Unsatisfactory The student displays need for improvement in knowledge, skills, and/or abilities.	Proficient The student displays competency in knowledge, skills, and/or abilities.	Mastery The student displays expertise in knowledge, skills, and/or abilities.
Results: (record results of assessment)	1 # of sections assessed 34 # of students assessed		
	Results Description (optional): 6/34 achieved Mastery (Scored 18 or above out of 20 pts possible) 22/34 achieved Proficiency (Scored 14-17 out of 20 pts possible) 6/34 achieved Unsatisfactory (Scored less than 14 out of 20 pts possible) April 5, 2019 Date of results		
	Criteria Results (# of students): 6/34 Unsatisfactory 22/34 Proficient 6/34 Mastery		
Results Analysis: (what did you learn?)	In general, results were positive in that over 82% of students achieved the course outcome. Some students struggled to explain precisely where the fallacy occurs and how the reasoning fails and causes the fallacy.		
Actions: (how will you improve, if needed?)	Create a new learning activity where students practice explaining where in the passage the fallacy occurs and how the reasoning fails and causes the fallacy. Fall 2019 Date of planned action		
	☐ YES or XX NO The actions (above) correlate to a new or existing resource request? If yes, identify the request(s) below:		

SIERRA COLLEGE

Departmental Assessment Analysis

(DAA form)

"Capturing the meaning of the assessment for the program."

Instructions:
- After departmental discussion and review of SLAS forms, complete the following form.
- Submit form to SLO Taskforce semi-annually. Due by census date.

Program/Degree/ Certificate:	
Today's Date:	
What does the department think it can do to improve teaching and learning?	
What help or resources are needed from the college to improve teaching and learning?	
What are top priorities for improvement?	
How will department implement those priorities?	
Provide timeline.	
Previous/ongoing actions or plans implemented (Refer to previous DAA form).	
Goals met, changes made or evidence of improvement.	

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Departmental Assessment Analysis
SAMPLE (DAA form)
"Capturing the meaning of the assessment for the program."

Instructions:
- After departmental discussion and review of SLAS forms, complete the following form.
- Submit form to SLO Taskforce semi-annually. Due by census date.

Program/Degree/ Certificate:	Business
Today's Date:	August 18, 2019
What does the department think it can do to improve teaching and learning?	Increase the amount, quality, and variety of formative assessments. Some CSLOs are only assessed through high-stakes exams or projects. Reassess after modifying formative and summative assessments.
What help or resources are needed from the college to improve teaching and learning?	None identified.
What are top priorities for improvement?	Share formative assessment practices within department Encourage faculty development.
How will department implement those priorities?	Best practices discussion related to formative assessment included on agenda at every department meeting. Distribute journal articles.
Provide timeline.	Meetings scheduled: 9/9, 10/14, 11/18 Articles distributed by Dept. Chair on or before Census.
Previous/ongoing actions or plans implemented (Refer to previous DAA form).	Previous actions: Create Canvas shell as a resource for part-time and full-time faculty to share best practices in assessment.
Goals met, changes made or evidence of improvement.	Were goals met? YES, Canvas shell created Jan. 2020. See: https://sierra.instructure.com/courses/307813

ACCJC Standards

Standard II: Student Learning Programs and Services
"The institution assesses its educational quality through methods accepted in higher education, makes the results of its assessments available to the public, and uses the results to improve educational quality and institutional effectiveness (ACCJC, 2014, P.5).

Standard II, A3: Instructional Programs
The institution identifies and regularly assesses learning outcomes for courses, programs, certificates and degrees using established institutional procedures. The institution has officially approved and current course outlines that include student learning outcomes. In every class section students receive a course syllabus that includes learning outcomes from the institution's officially approved course outline (p.5).

Standard II, A11: Instructional Programs
The institution includes in all of its programs, student learning outcomes, appropriate to the program level, in communication competency, information competency, quantitative competency, analytic inquiry skills, ethical reasoning, the ability to engage diverse perspectives, and other program-specific learning outcomes (p.6).

Standard II, A 13: Instructional Programs
All degree programs include focused study in at least one area of inquiry or in an established interdisciplinary core. The identification of specialized courses in an area of inquiry or interdisciplinary core is based upon student learning outcomes and competencies, and include mastery, at the appropriate degree level, of key theories and practices within the field of study (p.6).

Standard II, A16: Instructional Programs
The institution systematically strives to improve programs and courses to enhance learning outcomes and achievement for students (p.7).

Standard II, B3: Library and Learning Support Services
The institution evaluates library and other learning support services to assure their adequacy in meeting identified student needs. Evaluation of these services includes evidence that they contribute to the attainment of student learning outcomes. The institution uses the results of these evaluations as the basis for improvement (p.7).

Standard II, C2: Student Support Services
The institution identifies and assesses learning support outcomes for its student population and provides appropriate student support services and programs to achieve those outcomes. The institution uses assessment data to continuously improve student support programs and services (p.8).

SLO Dimensions of Quality

SLO Dimensions of Quality	High Quality	Acceptable Quality	Insufficient Quality
Formulates outcome description clearly. Picks from one of the formulas described below. Simply put, the formula should equal a well constructed description of what students will be able to do at the end of a course.	Clear outcome formula supports understanding. "Demonstrate effective negotiation skills in a workplace setting."	Missing one or more formula components that may inhibit understanding. "Demonstrate negotiation."	No discernable formula. "Students will experience a wide variety of techniques and exercises in negotiation."
Measurable Action Verbs Singular action verbs are easiest to manage, however, if multiple action verbs are used then the knowledge, realistic skills, and abilities should be congruent, and appropriate for the course level curriculum.	Action verbs are clear and observable, easy to measure, such as "identify" or "analyze."	Action verbs are clear and observable but may present challenges for measurement, such as "explain and synthesize."	Action verbs depict vague states of mind that are difficult to observe or measure, such as "appreciate" or "understand."
Student-centric. SLOs should be written in language that students are able to understand. This does not mean students should be familiar with terminology, rather they should clearly understand how this course will affect them.	Outcome description is simple and clear helping students understand the learning that will take place in the course.	Outcome description is clear but could be simplified to improve student understanding of the learning that will take place in the course.	Outcome description is overly complex, makes expectations difficult for students to understand.
Overarching. Represents the overall learning that occurs or is expected through all objectives. Describes what happens after working through all objectives. Objectives may be numerous but each must connect to an outcome. For example, Objectives: 1. Distinguish between verbal and non verbal communication. 2. Identify appropriate response skills while listening. 3. Define and identify ethical communication. The Resulting Outcome: Develop a personal communication improvement plan.	Outcome(s) provide(s) a holistic view of learning in the course—all objectives clearly align to at least one or more outcomes. When looking at both the course outcomes and objectives there are no disconnected objectives.	Outcome(s) provide(s) some reference to learning, perhaps specific learning but objectives only partially align to outcomes.	Outcome(s) provide(s) reference to tasks, activities, course content or objectives to be completed and does not indicate overarching view of learning and/or objectives do not align. When looking at both the course outcomes and objectives one or more objectives are disconnected.

Sample Outcome Formulas

What do students need to know or be able to do? + "in order to" + why students need to know = SLO
"Design an experiment in order to test a chemical hypothesis or theory."

Action verb + what students need to be able to know or do = SLO
"Demonstrate OSHA safety standards when welding."

Provide a specific scenario + action verb = SLO
"Given a welding blueprint, perform the welds to be used."

SLO Resources

Academic Senate for California Community Colleges
http://www.asccc.org/

Accrediting Commission for Community and Junior Colleges
http://www.accjc.org/

Association for the Assessment of Learning in Higher Education
http://aalhe.org/

Cabrillo College Student Learning Outcomes
https://sites.google.com/a/cabrillo.edu/student-learning-outcomes/

Inside Higher Ed, Assessment Changes Everything
http://www.insidehighered.com/views/2008/02/21/graff#sthash.kmMfwsdD.dpbs

Modesto Junior College Outcomes Assessment
http://www.mjc.edu/instruction/outcomesassessment/

Santa Barbara City College, Classroom Assessment Techniques
http://slo.sbcc.edu/resources/cat.html

Texas Tech University Office of Planning and Assessment
http://www.depts.ttu.edu/opa/resources/

University of California Los Angeles, Learning Outcomes Guidelines for Developing and Assessing
Student Learning
www.wasc.ucla.edu/eer_endnotes/Learning_Outcomes_Guidelines.pdf

University of Massachusetts office of Academic Planning and Assessment
http://www.umass.edu/oapa/oapa/publications/online_handbooks/

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