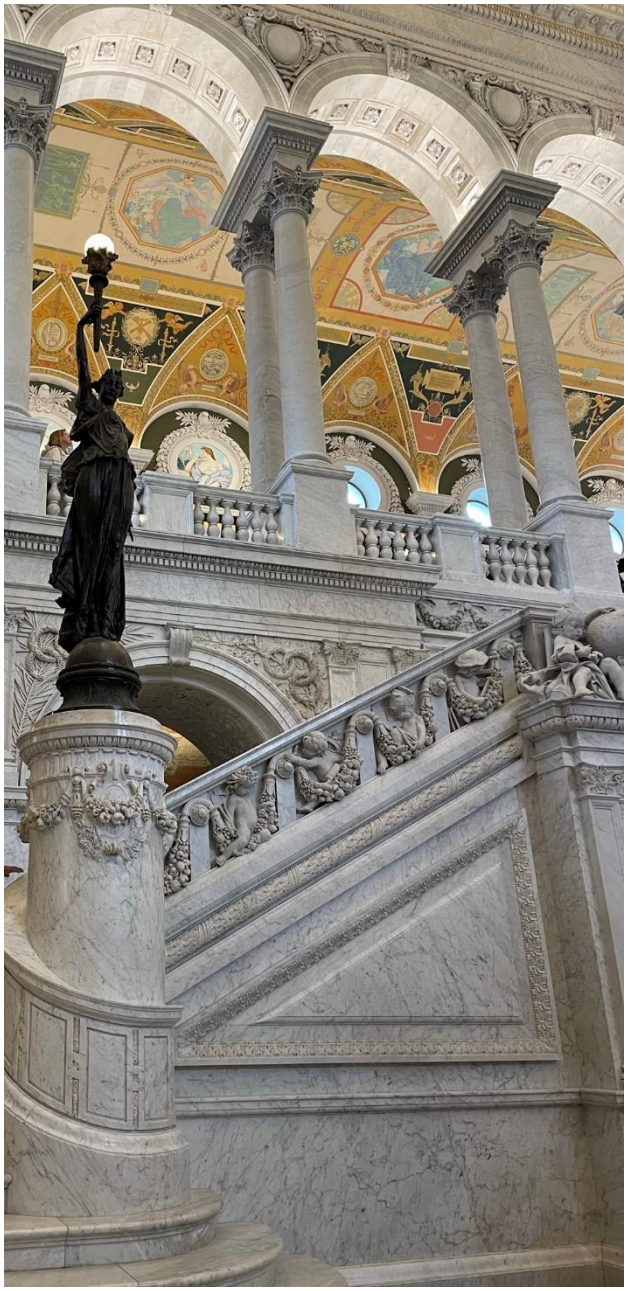
# GUIDE TO STUDENT LEARNING ASSESSMENT

Jarek Janio / Santa Ana College / 9.14.2022



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This publication is a result of countless discussions that took place in the last three years about the meaning and utility of assessment of student learning. Here's a list of people who helped it make it happen:

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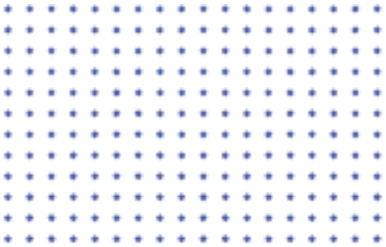
# INTRODUCTION

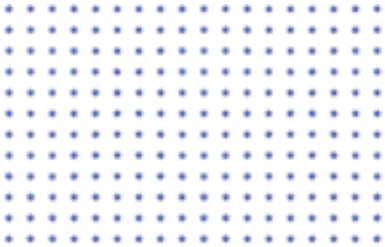


This guide is meant to equip faculty and their leaders with a specific set of guidelines for successful implementation of Student Learning Outcomes (SLOs) across courses, programs, and institutions.

For the purposes of this publication, learning is an acquisition of theoretical knowledge resulting in observable behavior. SLO statements are descriptors of that behavior that can be defined, described, and most importantly communicated to students so that they know what they learn, and how the learning is going to benefit them. This is an important consideration for equity discussions if skill and competence are traits of student empowerment, rather than good grades as reflections of compliance to the school rules. Paying attention to student learning and not arbitrarily set by faculty grades puts skill and competency acquisition in the middle of all classroom interactions. Instead of setting artificial deadlines for learning and exerting pressure on students to perform to the inconsistent standards, faculty observe what students can do. Students who can analyze, critique, apply, or evaluate do well in the course anyway. Assessment and evaluation of SLOs then, reveal skills and competencies that students acquired because of a learning experience and lead to improvement in instruction and learning.

Students do not learn what they do only when faculty let them. Learning takes place constantly, inside, or outside of the classroom walls, and all faculty need to do is recognize it and document it. For example, communication is at the core of any behavior demonstration. No matter the discipline, observable clarity of thought needs to be present for student successful completion of a task. Students should be able to explain their reasoning behind a choice of an algebraic formula to solve a problem or philosophical creed to justify a way of thinking. The doing, in turn, translates into observable behaviors that allow students demonstrate what they can do and to what effect.

Discussions surrounding Student Learning Outcomes (SLOs) have never been easy as faculty and their leaders, and never the students pondered their merits to define murky guidelines over the years. Driven by accreditation demands assessment of student learning has been largely perceived as a meaningless accountability requirement falling on the shoulders of faculty who are already doing their jobs teaching. These have been futile efforts resulting in frustration and calls for doing away with assessment of student learning in accreditation guidelines. The solution to implementation of SLOs however, rests not with convincing faculty about their merits, but rather creating a system of accountability driven by students demonstrating their skills and competencies as they learn them. SLOs are statements of competency or skills that students attain because of instruction, as guided by the course content. This point of reference refocuses attention of faculty and students, from what faculty are to “cover” in the course to the more important aspect of instructional activities, which is what students learn. Therefore, if SLOs originate with the course content, what are faculty teaching if not SLOs? What are the students learning if not SLOs? Finally, what are faculty assessing if not SLOs? And if there are changes that need to be made to the course content, curriculum committees on campus should be able to address those and guide faculty and their departments through the process.



Another important consideration here is that course, program, and institutional student learning outcomes co-exist in all courses and all disciplines. Students should have ample opportunities to demonstrate their skills and competencies as they learn them in a classroom. For example, student preparing a presentation about a structure of an atom, may be able to show their understating of

atom's structure, which is a focal point of a chemistry course, but also elements necessary for a deeper understanding about how atoms behave in complex chemical formulas as demanded by chemistry program. These in turn, would constitute institutional learning outcomes, such as: pattern identification, rule recognition, perception of complex designs, which are abilities important in any discipline across the campus. Finally, delivering presentations in front of the classrooms would help students demonstrate their public speaking skills, technology, organization, and clarity of thinking, as these may be skills and competencies expected of students to acquire as a result of attending an institution.

SLOs are all about switching the metaphor about what education is about. If the goal for students is to get a grade, then starting with the syllabus and ending with the whole institution we are all geared toward fulfilling that goal. With the best of intentions, faculty provide more than enough opportunities for students to take tests, to skip midterm, to review the materials studied or to make office hours flexible and clearly available. But the outcome of these activities is achievement of a necessary score, not learning, not attainment of any skill or competency. While learning can be implied, it still is secondary to everything else that happens on campus.

Focus on learning, moves us away from solutions to cheating and tardiness to demonstration of skills. Classroom attendance is very often counted towards the final grade in the course, a practice which does not reflect on student learning and is often of grave consequences to students who find getting to school on time challenging. Contrary to the belief of accountability based on attendance, classroom participation and punctuality, learning is ubiquitous and cannot be started or stopped as if in a vacuum. Students should not be objects of our manipulation like amoebas in a petri dish. Faculty need to observe the learning taking place, identify its limits and show students what's possible, and what may happen next with what they already can do. With skills and competencies that students develop, making a difference in their communities, improving their lives, benefiting them and people that they care about are much more purposeful and profound human experiences than assuring good grades and competing courses.

This guide is designed to point institutions of higher learning towards a different goal: competency attainment, rather than grades. This set of guidelines is very much a work in progress. I welcome comments, suggestions and most importantly case studies of how focus on learning is changing higher education classrooms.

## Step 1: Course Content Analysis

- Student Learning Outcomes originate with Course Outline of Record (COR), or a similar, official publication, as a document that specifies course content. Faculty deliver that content with an intent for students to learn it. Therefore, development of SLO statements starts with a thorough and detailed analysis of concepts, skills, and competencies that students are expected to learn as they are detailed in the COR document.

- Course content analysis, done by the faculty, needs to identify the overarching concepts for the given course and describe skills and competencies that students are going to learn. A very important point of consideration here is that the focus really needs to be on what it is that students learn, rather than on what the course offers or even what faculty want to present, discuss or "cover" in the course.

- The language describing what students learn must be very specific, clearly indicating what students will be able to do because of instruction. This is very important for equity considerations, because students need to be informed from the very beginning about what skills and competencies they are going to be expected to acquire and demonstrate in the course.

- Once the overarching, larger outcomes are identified, smaller steps, leading to student attainment of those skills and competencies need to be articulated as well. These smaller steps are normally referred to as objectives.

- At the end of the analysis of the course subject matter, faculty generate a list of outcomes and objectives encompassing the entire course content. Once this task is finished, the question of how many outcomes in the course are required goes away, because outcomes and leading to them objectives incorporate the entire course content. Therefore, as long as faculty teach course content, they are making sure that students are learning skills and competencies as outlined in the Course Outline of Record.

## NOTE:

Why is it important to start with course content? Let's imagine that a course has two distinct outcomes, or competencies that students are expected to acquire: one having to do with the theory of the course and the other with practice. Each is distinctly different from the other. They both can probably be assessed differently and a grade of B+, for example, does not say to what extent the student acquired one or the other of the two outcomes.

# SIX STEPS FOR SLO IMPLEMENTATION

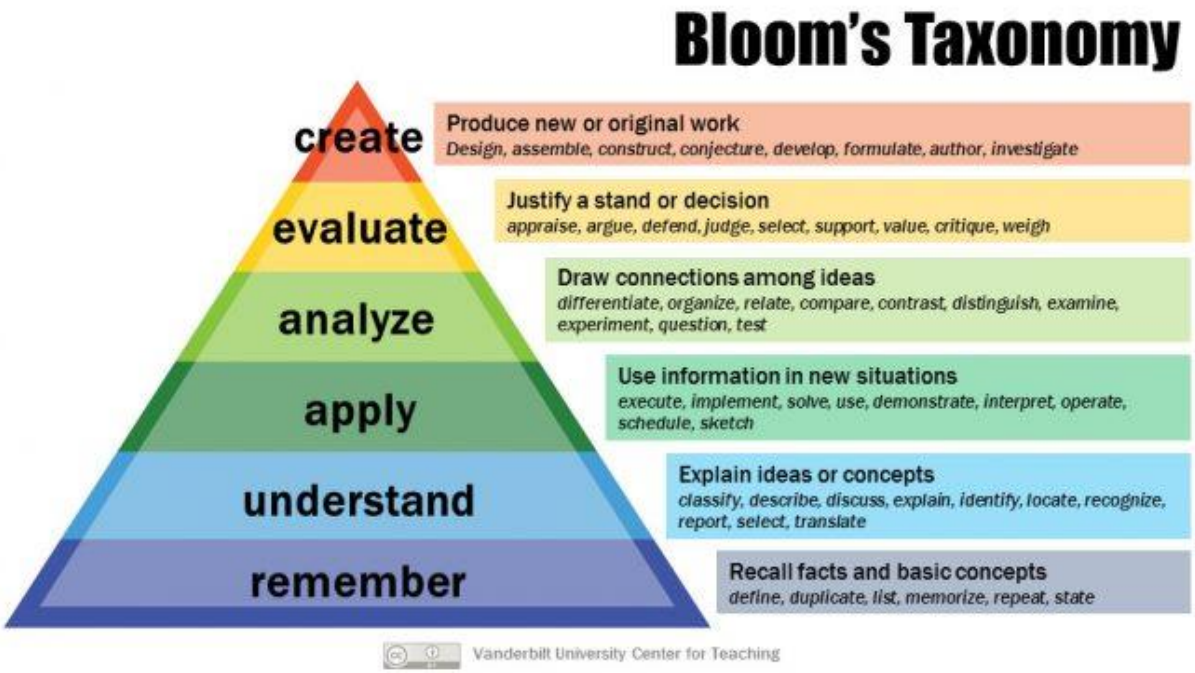
## Subheading Step 2: SLO Statement Design

- Using Bloom's Taxonomy or other similar classification of verbs faculty responsible for the given course, compose and write out all student learning outcomes and objectives answering the questions of what students are going to be able to do by the end of the given instructional activity, course, program or even as a result of attending a given institution of higher learning.

- The same verbs describing what students will be able to do, can describe outcomes and objectives. The difference is not the composition of the given statement, but rather its position in the course. For example: in an English class, students will be able to write a short story consisting of three paragraphs. This could be an outcome in a course where other forms of writing such as: summary or critique are taught. This, however, could also be an objective, in a class where students get ready to write longer stories.

- Verbs describing what students can do from the bottom of the Bloom's Taxonomy such as: list, define, state, or repeat tend to be descriptive of tasks that are less cognitively demanding for students as compared to the ones from the top of the framework such as: organize, compare, critique, organize, or design.

- SLOs to be measured need to be expressed as descriptions of observable behavior. This means that at the end of any instructional activity, students need to be ready to demonstrate what they have learned.



## Step 3: SLO Alignment to Program and Institution SLOs

- Once SLO statements are written for courses, responsible for the discipline faculty align specific course student learning outcomes to Program Learning Outcomes and further to Institutional Learning Outcomes. These are skills and competencies acquired by students at the program and institutional levels usually in a sequence of courses that constitute a program.

- While Course Outline of Records delineates specific course level outcomes, program learning outcomes may come from a variety of documents that provide specific guidelines from outside of our institutions. Depending on the discipline, those could be Board of Registered Nursing, American Psychological Association, the Association of Computer Engineers and Technicians, just to give some examples. These will help specify skills and competencies that students finishing programs should possess.

- Just like is the case with course level outcomes, a thorough and in-depth analysis of program learning outcomes needs to be performed to establish links and alignment between course level outcomes and competencies and skills exhibited by students completing the given program.

- Institutional level outcomes (ILOs) need to be aligned with institution's mission and vision statements. ILOs are usually broader competencies such as: critical thinking, leadership, problem solving, or communication skills and they can be found in subject matter of any discipline and should be of interest to all stakeholders throughout the institution. After all, we all want our students to manifest critical thinking, empathy, and collaboration skills upon graduation regardless of the program they completed.

**"Assessment in higher education has a range of challenges related to improving measurement, addressing inequities, and fostering continuous improvement. To enable collective solutions to these grand challenges, the shift away from compliance towards assessment for improvement needs to be fully realized." Karen Singer-Freeman & Christine Robinson, November 2020.**

## Step 4: Direct Assessment Rubric Design

- After the careful analysis of the course content and identification of skills and competencies that students are expected to acquire, assessment rubrics need to be developed just as carefully for each one of the student learning outcomes identified at the course level. Assessment rubrics are tools that allow for very careful recording of results of these demonstrations.

- Student Learning Outcomes (SLOs), Program Learning Outcomes (PLOs) and Institutional Learning Outcomes (ILOs) are all demonstrations of what it is that students can do as a result of instruction. These demonstrations can only be assessed at the course level as a result of direct assessment activities such as: presentations, group interactions or other observations of students' behaviors or products of learning that students generate such as portfolio with samples of writing, art, videos or photographs.

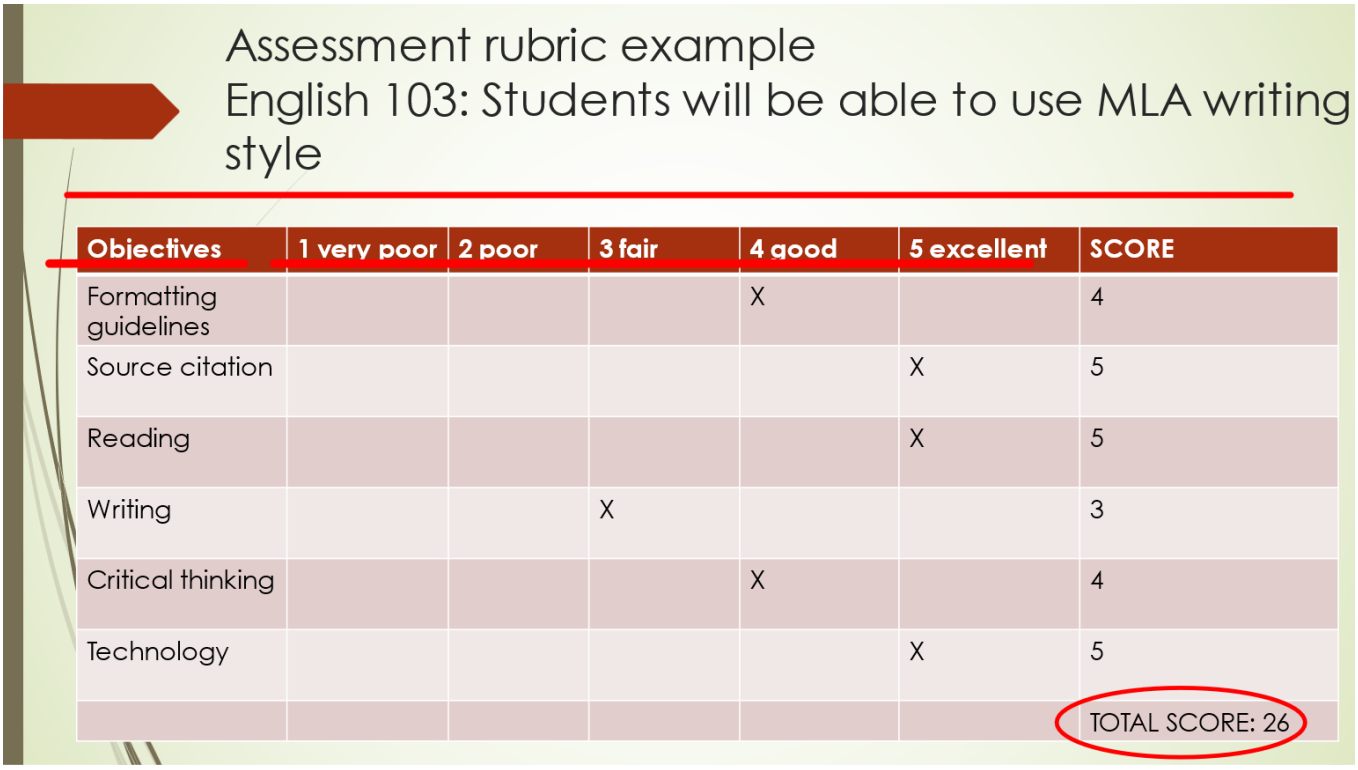
- Program Learning Outcomes and Institutional Learning Outcomes may be measured together as they can also be assessed only at the course level.

- For example, students presenting an ability to analyze chemical compounds, may do it in a form of an oral PowerPoint presentation done online. Chemistry instructor then can attest to the student learning at the course level, department can evaluate student learning at the program level as the student is demonstrating an aspect of chemistry important to the program, and an institutional level student learning outcome can be documented as the students present their abilities to speak publicly, which may be an institutional learning outcome.

- A comprehensive assessment rubric of this kind allows for assessment of skills and competencies at all levels at once. Upon program completion and upon graduation from the institution, students should be ready to demonstrate these skills to their employers and at higher levels of their academic careers.

**"I define direct evidence as not only observable but sufficiently convincing that a critic would be persuaded. Imagine someone prominent in your community who thinks your college, your program, or your courses are a joke—students learn nothing worthwhile in them. Direct evidence is the kind that the critic wouldn't challenge." (Linda Suskie, 2019).**

- How should assessment rubrics be designed? This depends on what is assessed. There are many different types of rubrics and many ways to design them. Rubrics may be discipline-specific, and they may contain a list of SLOs, PLOs and ILOs accompanied by their corresponding statements of proficiency. Here's an example:



Assessment rubric example
English 103: Students will be able to use MLA writing style

| Objectives | 1 very poor | 2 poor | 3 fair | 4 good | 5 excellent | SCORE |
|---|---|---|---|---|---|---|
| Formatting guidelines | | | | X | | 4 |
| Source citation | | | | | X | 5 |
| Reading | | | | | X | 5 |
| Writing | | | X | | | 3 |
| Critical thinking | | | | X | | 4 |
| Technology | | | | | X | 5 |
| | | | | | | TOTAL SCORE: 26 |

On the top of the rubric, there is a specific, overarching Student Learning Outcome statement, skill or competency that students are expected to showcase in the given assessment task.

On the left-hand side, in one column there is a list of objectives, or smaller steps that students need to present to attest to the skills and competencies acquired in the course or as a result of an instructional activity.

On the top of the list, there is a Likert-type scale that will help faculty assess the level of mastery. Score for each skill demonstrated is to be recorded on the right-hand side of the rubric and added to the final score.

## NOTE:

Direct assessment allows for observation of demonstration of specific skills and competencies. Indirect assessment activities such as: student satisfaction or engagement surveys are not reflective of what it is that students can do by design.

## Step 5: SLO Assessment Data Analysis

- SLO, PLO and ILO assessment data are collected on rubrics during assessment activities.

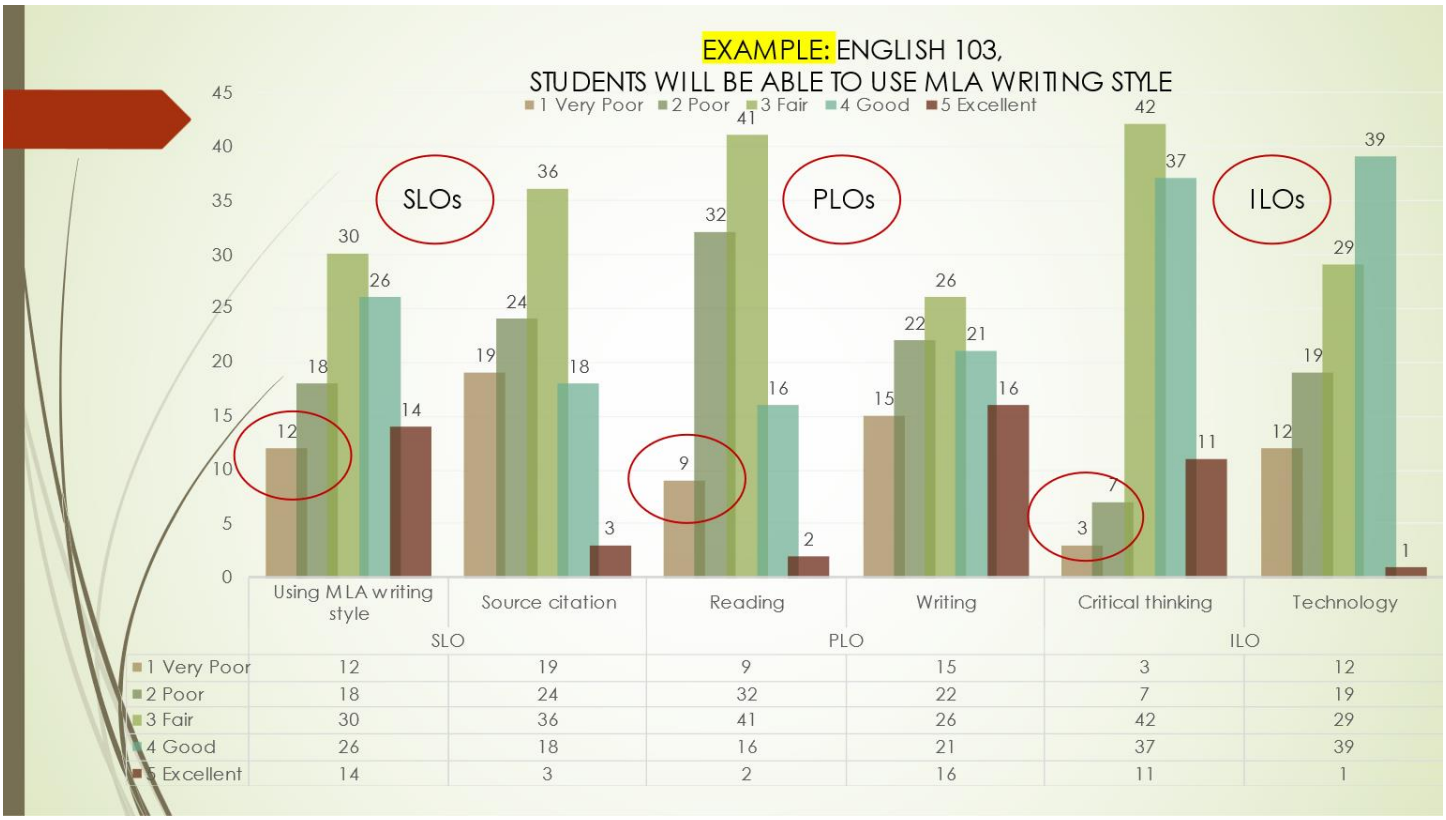
- After students' performance is assessed, data from the rubric can be analyzed for course, program, or institutional improvement. Direct assessment of student learning is designed to provide data to point to what and how well students learn.

- Analysis of that data will help identify areas necessary for improvement. Once all the specific skills and competencies for students to attain in the course, program and institution are identified, then the question of frequency of assessment goes away because improvement of teaching and learning is a constant and ongoing process.

- The analysis of this data needs to be performed at the course, program, and institutional levels to make learning visible for faculty and students.

- Gaps in student acquisition of skills and competencies, as indicated by the assessment of student learning outcomes. Students would want to know what and how well they are learning every step along the way.

- Here is an example of what a visualization of student learning may look like:




## Step 6: Closing of the Assessment Loop

- As a result of the data analysis, necessary resources need to be requested. Departments act on that data to plan for improvement of both teaching and learning. The planning may include resource requests having to do with scheduling, textbooks, lab hours, support staff availability, or faculty hiring and workload among others.

- To address the gaps, interventions having to do with the organization, planning, availability of resources, or staffing will need to be implemented.

- Results of student learning assessment should also be disaggregated to analyze the learning among underrepresented populations. It would be of great benefit to individual faculty, departments, and the institution to know which students are critical thinkers, leaders, or problem solvers.

- Finally, in accord with action research guidelines, after instructional interventions are in place, instruction, assessment, and data collection processes start anew.

**"A great source of distinction among campuses is the articulation of their**

**civic, global, and community commitments. Yet the power of these commitments is often left in mission statements, rather translated into learning outcomes. At a time when colleges and universities have an unprecedented opportunity to support American democracy, campuses need to elevate the explicitness of these outcomes within and across students' learning." (AAC&U, 2022)**

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