






Student Learning Objective (SLO)

User Guide

2019-2020

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Introduction

The purpose of this user guide is to support Teacher Candidates in the understanding of the Student Learning Objective (SLO) process. SLOs are typically a semester- or year-long intensive learning plan that include a variety of informal and formal assessment to support target learning objective(s). This guide is a modified version of the SLO to prepare Candidates in understanding the process and the importance of having a systemic approach to support student learning outcomes. Although one of the major goals of a SLO is to document student learning over a period of time, you will be evaluated on the process as outlined in the SLO Process Rubric (Appendix A). Also, you will be evaluated on your ability to develop and implement an evidenced-based unit plan that should, if implemented with fidelity, impact student learning. The following is the minimum expectation for completing the SLO during student teaching. Thus, the SLO will focus on a modified time frame and a focused learning objective. Also, the process of completing the SLO was modified to meet this expectation without sacrificing the integrity of the process. The following is a proposed timeline to complete the various components of the SLO:

- The SLO should be completed during the first half of student teaching.
- A minimum of six P-12 students is required to complete the SLO. Candidates who are completing a SLO in a special education classroom may be required to complete a SLO with less than six P-12 students. This must be approved by the University Supervisor and Mentor Teacher (MT).
- Complete and submit the SLO template (Appendix B) – Upload to Tk20.
- Develop and implement a unit plan that consists of five (5) consecutive lessons (or five [5] hours of instruction in a block schedule format) to address using the SLO – Upload to Tk20.

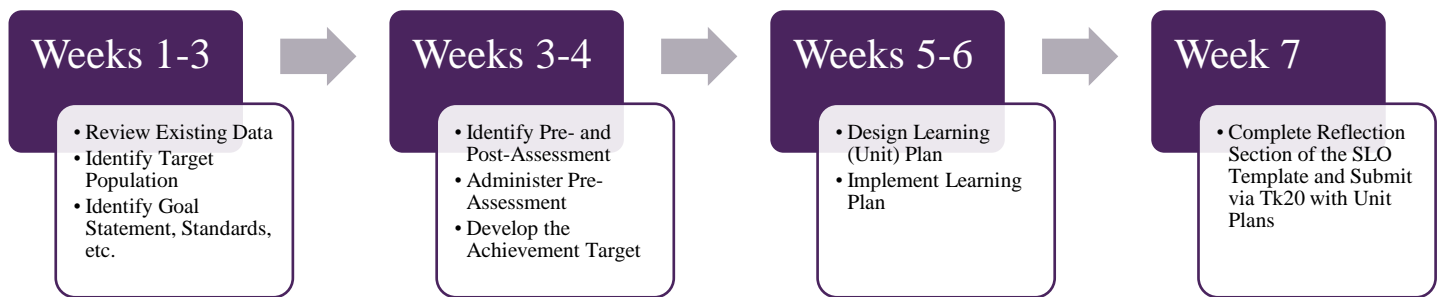


Figure 1. Proposed timeline for completion of SLO components during the first half of student teaching.

What is a Student Learning Objective (SLO)?

Classrooms are complex places, and measuring student learning can be challenging due to unique grade-level and subject characteristics. However, student learning is the ultimate measure of the success of a teacher as an instructional leader. Effective teaching involves the close analysis of student data to develop a learning plan to support student growth within an academic year, semester or at the end of a unit plan of study. SLOs are a systemic approach to ensure teachers have a strategic plan to support student learning. The SLOs are content-specific, grade-level learning objectives that are measurable and focus on student academic growth. Creating SLOs are a process by which teachers establish expectations for student growth during a specific period of time. See Figure 2.

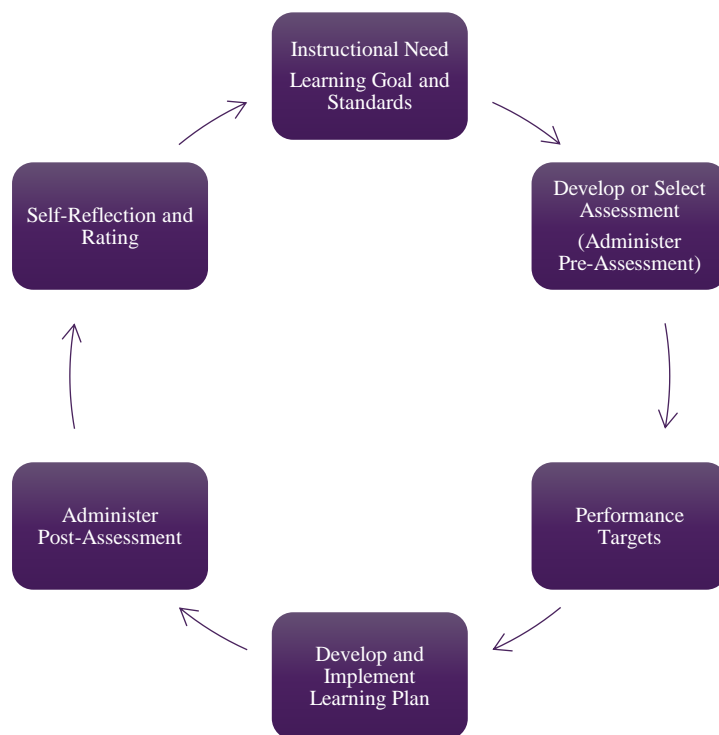


Figure 2. Process for teacher candidates to develop a SLO.

Student Performance Data and Instructional Need

The first step of the process is to work collaboratively with the Mentor Teacher (MT) to review assessment data to determine the instructional area of concern. If the MT is required to complete a SLO within their district, it may be practical to select a learning objective that coincides with the SLO created within the classroom. Most importantly, archival achievement data should be used to inform the instructional decisions made. The following is a list of some data sources that may be available in the classroom:

- Summative assessments (unit test, Keystone exams, etc.)
- Formative assessments (DIBELS, AIMSweb, NWEA)
- Quizzes (should be used in conjunction with the items in the first two bullets)
- Homework assignments (should be used in conjunction with the items in the first two bullets)

In cases where these data are not available, talk with your MT to gather any information on students' needs. Additionally, you may decide to address a concept, skill or strategy that has yet to be introduced within the

classroom. Collaborating with the MT is critical in developing a rationale for making this decision. The analysis of archival student achievement data is essential to support the decision. When providing a justification in the SLO template (Table 1), you should discuss common themes from the data gathered and any additional information that will support the decision made. Those themes may include errors or misconceptions noted in the data analyzed.

Based on the information gathered, you should be able to identify students (minimum of 6 students during student teaching) that would be the focus of the SLO. It is at this time you will need to determine information about each student (any particular learning challenges) that will be important as you develop an educational plan.

Note: As Teacher Candidates, it is important to protect the privacy of P-12 students thus pseudonyms should be used when referencing any information about students in the SLO. This includes reporting on any data gathered about the student and any potentially identifying information.

<p>Analysis of Student Performance (Stage 1) Describe the data sources used (NWEA, DIBELS, Unit test, etc.) that provide evidence of a potential instructional concern that warrants significant academic support. Describe your analysis of the data and areas of concern with respect to at least one academic standard. If these data are not available, talk with your Mentor Teacher to gather any information on students' needs.</p>	
<p>Identification of Instructional Need & Identification of Target Population (Stage 1) Based on the data collected above identify the instructional needs and how it will relate to your goal, essential question and standards. What research was conducted on students (Individualized Education Plan [IEP], English Language Learner [ELL]) and rationale for selecting the target group.</p>	

Table 1. SLO template (Excerpt).

Standards and Outcomes

As you consider the instructional need, you should determine the goal, standards, essential questions, and academic language that will support the identified area of concern. The [PA Curriculum Framework](#), discussed later in this document, would be a valuable resource to complete this section of the SLO template (Table 3).

PA Standards & Other Appropriate Professional Standards

Based on the instruction need identified, you should select the standard(s) of focus. It is of great importance that you identify standard(s) that align to the skill, concept or strategy selected above. Also, it is important you choose standards that can be accomplished within the timeframe of the SLO. In the WCU Lesson Plan template, you will identify the standard(s) for each lesson. Please reference the Unit or Lesson Plan User Guide for further directions.

Goal Statement (Big Idea)

The Goal Statement, not to be confused with Achievement Target discussed later in the document, is the “Big Idea” or central focus of the mini-unit of study. Although you have identified an area of concern or focus (i.e., inference, adding two digit numbers, cause and effect), and selected potential standard(s), you need to consider

why helping students address this standard is critical. The Goal Statement should promote in-depth understanding. The Big Idea is a statement summarizing important ideas and core process that are central to a discipline and have lasting value beyond the classroom. It is more than concepts or skill we want to teach.

For example, in Table 2 each non-example is either factual information (students will understand fruits and vegetables contain essential vitamins) or a skill (students will understand the area of a triangle). In both cases they do not focus on the big picture. To assist in identifying the Big Idea, you should review the [PA Curriculum Framework](#) that is aligned to the standard(s) selected. In this case, you will have to decide which Big Idea will be the focus of your mini-SLO. It is unrealistic to believe you will be able to address every Big Idea included within the [PA Curriculum Framework](#) with the depth of knowledge articulated in the Framework. To select or write an appropriate Big Idea(s), you should respond to the following questions when thinking about the skill, strategy or concept and standard that was selected for the SLO.

- Why is this standard, concept, strategy or skill important?
- How is this standard, concept, strategy or skill essential in the world beyond the classroom?
- What would happen if you didn't understand the standard, strategy, concept or skill?
- How will the standard, concept, skill or strategy promote in-depth understanding?
- What will students come to understand if they really learn this content well?

Based on the information above you should ask the following questions to write or select the appropriate Big Idea from the [PA Curriculum Framework](#).

Examples of a Big Idea	Non-Examples of a Big Idea
Students will understand that math is about pattern and order.	Student will understand the area of a triangle.
Students will understand healthy nutrition influences our livelihood.	Students will understand fruits and vegetables contain essential vitamins.
Students will understand that experience can play a role in one's interpretation.	Students will be able to infer the meaning of a story.
The story teller rarely tells the meaning of a story.	Students must identify author's purpose.

Table 2. Examples and non-examples of a Goal Statement (Big Idea).

Essential Questions

It is also important to consider the Essential Question(s) that will be the focus of the SLO unit plan. Essential Questions should lead students to the goal and support content standards. Developing questions can be tricky and requires careful attention that the question(s) are written in a way to allow for discovery. Essential Questions should promote inquiry of the subject of focus and according to Wiggins & McTigh (2005), they have the following characteristics:

- No simple right answer
- Raise other important questions
- Stimulates critical thinking
- Refers to the core ideas of the focus of study

Essential Questions can either be overarching or topical. Overarching questions frame courses and program of study around truly Big Ideas. Topical questions are unit specific but still promote inquiry. See examples below:

- What is a true friend? (overarching)
- Does practice make perfect? (overarching)
- To what extent is history a history of progress? (overarching)
- What is the value of place value? (topical)
- Why experience is related to what we infer? (topical)
- How might Congress have protected the rights of underrepresented populations during the civil rights era? (topical)

The [PA Curriculum Framework](#) in Figure 3 is a guide in identifying the appropriate questions. You will have to consider which Essential Question(s) is/are relevant to the skill, strategy or concept of focus for the SLO.

Pennsylvania Curriculum Framework Resource

The [PA Curriculum Framework](#) (Figure 3) is a good resource to begin selecting the goal (Big Idea), Essential Questions, standards, and Academic Language for the SLO. Please note that your unit will be a mini version of a SLO thus you will have to decide what standards/competencies can be completed within the time allotted to complete the SLO. In essence, you will not have time to address every Big Idea or Essential Question so you will have to carefully select the items that align with your SLO.

Grade	Big Idea	Essential Questions	Concepts	Competencies	Standard	Eligible Content	Vocabulary
7	<p>Mathematical relationships among numbers can be represented, compared, and communicated.</p> <p>Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.</p> <p>Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.</p> <p>Patterns exhibit relationships that can be extended, described, and generalized.</p>	<p>How is mathematics used to quantify, compare, represent, and model numbers?</p> <p>How can mathematics support effective communication?</p> <p>How are relationships represented mathematically?</p> <p>How can expressions, equations and inequalities be used to quantify, solve, model and/or analyze mathematical situations?</p> <p>What does it mean to estimate or analyze numerical quantities?</p> <p>What makes a tool and/or strategy appropriate for a given task?</p> <p>How can recognizing repetition or regularity assist in solving problems more efficiently?</p>	<p>Ratios, Proportions, and Percent</p>	<p>Compute unit rates associated with ratios of fractions.</p> <p>Recognize and represent proportional relationships between quantities.</p> <p>Use proportional relationships to solve multistep ratio and percent problems.</p>	CC.2.1.7.D.1	<p>M07.A-R.1.1.1</p> <p>M07.A-R.1.1.2</p> <p>M07.A-R.1.1.3</p> <p>M07.A-R.1.1.4</p> <p>M07.A-R.1.1.5</p> <p>M07.A-R.1.1.6</p>	<p>Acute triangle</p> <p>Adjacent angles</p> <p>Alternate exterior angles</p> <p>Alternate interior angles</p> <p>Chance event</p> <p>Circumference</p> <p>Complementary angles</p> <p>Compound event</p> <p>Corresponding angles</p> <p>Data distribution</p> <p>decrease</p> <p>Equally likely</p> <p>Equilateral triangle</p> <p>Independent event</p> <p>Isosceles triangle</p> <p>Likely event</p> <p>Linear expression</p> <p>Obtuse triangle</p> <p>Outcome</p> <p>Percent increase and</p> <p>Population</p> <p>Probability</p> <p>Process of chance</p> <p>Proportion</p> <p>Random sample</p> <p>Relative frequency</p> <p>Repeating decimal</p> <p>Scale drawing</p> <p>Scalene triangle</p>

Figure 3. PA Curriculum Framework.

<p>Goal Statement</p> <p>A description of the enduring understanding or big ideas students will possess at the end of the learning plan based on grade level content standards and curriculum.</p>	
<p>Essential Questions</p> <p>Essential questions center on major issues, problems, concerns, interests, or themes relevant to the classroom. Essential questions should lead students to discover the goal (enduring understandings). They need to go beyond <i>who</i>, <i>what</i>, and <i>where</i>. They need to lead to the <i>how</i> and <i>why</i>.</p>	

Table 3. SLO template (Excerpt).

Assessment Plan

Pre- and post-testing is a measurement of the learning received as a result of comparing what the students knew before in a pre-test and after the implementation of the education plan (unit plan) in a post-test. The assessment plan is essential to quantify the knowledge attained in the class or learning experience from diverse groups of students.

Selecting or developing high-quality assessments is an integral component of the SLO process. Because assessments should measure what students are expected to learn over their time in a course (in your case at the end of a unit), a quality assessment provides an indication of the degree to which the Teacher Candidate had an impact on P-12 students' learning. Since the goal of the SLO is for Teacher Candidates to understand the process, the Candidate will only be assessed on the critical components outlined within the SLO Process Rubric (Appendix A) and the design and implementation of the SLO unit plan.

The assessment(s) used to monitor student growth should be approved by the Mentor Teacher. As the SLO template (Table 4) illustrates there are some critical components to consider including the description of the pre- and post-assessment, the validity and reliability of the measures, the assessment window, and the analysis of baseline data.

PRE- AND POST-ASSESSMENT PLAN (STAGE 2 SLO RUBRIC) The various tools/assessments which will be used to measure student achievement toward a specific goal.		
Describe the pre- and post-assessment (such as performance task and rubrics) that measure students' understanding of the goal.		
How will you ensure the assessments are valid and reliable data? If using a proprietary assessment provide information on the tool and why it was selected. If the tool is not proprietary discuss how you will ensure content validity and reliability?		
Assessment Window Assessment window should not be included as part of the learning plan activities. Pre-assessment should be administered well in advance of instructional delivery. Post-assessment should be administered after the last day of formal instruction.	Pre-Assessment Date:	Post-Assessment Date:
Baseline and Trend Data After administering the pre-assessment, describe the data used to identify assessment and growth targets. Explain how this data helped you identify the growth targets for your students. How was the assessment done? What were the results of the data gathered?		

Table 4. SLO template (Excerpt).

Validity and Reliability

When selecting an assessment, there must be confidence that the assessment is valid, reliable, rigorous, and comparable (see Table 5 for a description of each). To ensure the assessments are well constructed it is encouraged to use vendor-prepared, commercial assessments. If those assessments are not available, a teacher-created assessment could be used. To ensure the teacher-created assessments are well constructed the South Carolina Department of Education (2015) developed an Assessment Checklist found in Appendix F that can be used as a guide to determine the quality of teacher-created assessments.

To measure progress, the pre- and post-assessment should be identical or parallel forms in the case of some commercially developed assessments such as Curriculum Based Measurement tools (CBMs) (e.g., DIBELS, Easycom, AIMSweb, etc.). CBMs are typical for specific areas such as fluency, numeracy, basic facts or skills, math concepts, comprehension. In other content areas (science, social science, etc.), probes may not be readily available thus teacher-created assessments will be ideal with careful attention to ensure the instrument can provide valid and reliable data.

Criterion	Description
Valid	The assessment items are representative of the skill and concepts learned. Allowing “experts” (mentor teacher, university supervisor) to validate the assessment would be helpful.
Reliable	The assessment provides consistent results.
Comparable	The pre- and post-assessments are aligned in content, complexity, form, and scoring. For teacher-created tests it is appropriate to give students identical or parallel form pre- and post-test forms.
Rigorous	The assessment allows students to demonstrate appropriate level of skill, understanding and knowledge.

Table 5. Criterion and Description.

Assessment Window

The pre-test should be administered in advance (minimum of a week before the first delivery of the first SLO lesson) to allow the opportunity to make the necessary adjustment to your SLO unit plan and to develop an appropriate Achievement Target (discussed below). The post-test should be administered soon after the last lesson of your unit plan.

Baseline and Trend Data

After the administration of the pre-assessment, you need to write within the SLO template the results of the baseline data. It may help as you write this section to consider the Achievement Target discussed later in the document. Explain how this data provides some insight into the area of concern. How was the assessment administered and data gathered? What are common themes that may have emerged for the baseline data?

Achievement Target (SLO Growth Target)

Baseline data collected should be used to develop the Achievement Target, also known as a growth target. The Achievement Target should challenge students to meet high expectations regardless of the baseline data collected.

The approach to setting growth targets should be addressed within the appropriate section of the SLO template (Appendix B). Assessment data should be reviewed to determine if a growth goal is appropriate. In many cases, the growth targets should be tiered or individualized so that they are both rigorous and attainable for students. Table 6 provides an explanation of the different types of growth goals including the potential benefits.

Uniform Growth Target	Tiered Targets	Individual (Half-Split or Half to 100)
One target for all students in the SLO	Two or more differentiated targets for groups of students identified by analyzing baseline data	Straightforward method for ensuring rigorous targets Each student will have an individual target
Good for students who have similar results on the baseline data Course content requires a specific level of mastery Student need to work together to achieve a task (orchestra, dance, etc.)	Allows to project achievement for students who are at, above or below expectation based on data gathered	Great if you prefer simple calculation Difficult calculation for high performing students

Table 6. Types of Achievement Targets (growth targets).

Writing an Achievement Target

Based on the data collected to this point, you should have enough information to create an Achievement Target. The Achievement Target should take into consideration the Goal Statement (Big Idea), standards, Essential Questions and the baseline data collected. The Achievement Target should be written as a S.M.A.R.T goal that has the following characteristics:

- **Specific:** The Achievement Target is focused, for example by content standard or the needs of the learner. It addresses the Big Idea and standards.
- **Measurable:** An appropriate instrument/measure is selected to assess the target. Assessments are valid and reliable.
- **Appropriate:** Attainable within the time frame.
- **Realistic:** The learning target is feasible and strategically focused to be covered within the time frame.
- **Time-limited:** The target is contained within the time frame allotted for the mini-unit of study.

The Georgia Department of Education (2012) published examples and templates in the development of three types of Achievement Targets that can be used as a guide in the development of the SLO. Examples can be found in Appendix E.

Instructional Plan Outline

In this section you should provide an outline of the unit plan of study. This section can be developed as daily major objectives and activities or a narrative discussing the focus of the learning plan. It is important to include theory or research to support the instructional strategies selected to ensure student learning over time. Include the instructional window (start of the first lesson and the day of the last lesson) not including the pre- and post-assessments.

INSTRUCTIONAL PLAN OUTLINE (STAGE 2 SLO RUBRIC) Outline the daily evidenced based instructional strategies and/or grouping strategies that will be used to teach the content.		
Provide an outline or brief description of instructional strategies to support the learning goal. (Theory or research that supports the selection of the strategies)		
Instructional Window	Start Date: (First formal instruction after the administration of the pre-assessment)	End Date: (Last day of formal instruction before administration of the post-assessment)

Table 7. SLO template (Excerpt).

Unit Plan

You are required to develop five (5) consecutive lessons (or five [5] hours of instruction in an instructional block sequence). You will use the WCU Lesson Plan template that can be accessed in Appendix C. Both the SLO template and unit plan should be uploaded to Tk20.

Reflection

After you have administered the post-assessment, you need to record the actual number and percentage of students who achieve the Achievement Target you identified above. Based on the number of students who met your target, provide a candidate self-rating as indicated below. As mentioned earlier you will not be assessed on the number of students who have met or did not meet your original Achievement Target, but you will be assessed on your ability to complete the process and reflect on your strengths and areas of growth. You should think about specific areas within your control and any changes you would make to ensure all students will either make significant progress or enrich the learning experience. When writing this section, you should consider how you would change your instruction, lesson delivery, academic goals to meet the learning outcomes. The following are some prompts that can be used as a guide.

- What did you learn about completing the SLO?
- Based on the data gathered and self-rating, what do you believe were challenges you faced and/or changes you would have made in the delivery of instruction that would support the learning outcome?
- What was the rationale for selecting the learning activities?
- What assumption did you make about students that may have influenced your ability to impact student learning?

REFLECTION (STAGE 3 SLO RUBRIC – REFLECTION ONLY) Identify the results of the pre- and post-assessment of the targeted population. Complete this section <u>after</u> the implementation of the SLO.	
Record the actual number and percentage of students who met the achievement target in a table.	
What number or percentage of students met the achievement target? <u>Please complete in Tk20.</u>	
Candidate Self-Rating Based on the data gathered how would you rate your performance? Select one. <u>Please complete in Tk20.</u>	<input type="checkbox"/> Does Not Meet (0% – 69% of students performed worse than expected) <input type="checkbox"/> Needs Improvement (70% – 79% of students performed as expected but overall the group is below expectation [need a minimum of 80%]) <input type="checkbox"/> Meets (80% – 94% of students performed as expected) <input type="checkbox"/> Exceeds (Over 95% of students performed better than expected)
Reflective Narrative What did you learn about the process? Based on the data gathered and self-rating what do you believe were challenges or changes you would have made in the delivery of instruction that will support the learning outcome? What was the rationale for selecting the learning activities? Please use the SLO rubric to support the development of the narrative.	

Table 8. SLO template (Excerpt).

Appendices

Click on the appendix name to download the file.

[Appendix A: Student Learning Objectives \(SLO\) Process Rubric](#)

[Appendix B: SLO Template](#)

[Appendix C: WCU Lesson Plan Template](#)

[Appendix D: International Society for Technology in Education \(ISTE\) Standards for Educators](#)

[Appendix E: Growth Target Examples and Templates](#)

[Appendix F: Assessment Checklist](#)