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| C:\Users\bjaco\AppData\Local\Microsoft\Windows\INetCache\Content.Word\SLS-Teaching-Toolkit-Logo_Stacked-Initials.jpg | SOLO Taxonomy Rubric  |
| **Time Commitment:** 15 -30 mins | **Type:** Take-home assignment, project | **Big Ideas:** Cognitive flexibility; Design thinking |
| **OVERVIEW**The SOLO (Structure of Observed Learning Outcomes) Taxonomy Rubric is a rubric adapted by Serve-Learn-Sustain to assess SLS's Student Learning Outcomes (SLOs). The rubric can be adapted to assess any of the eight SLOs that instructors can use when partnering with SLS for their courses. This rubric is intended to beaAdaptable for each instructor’s use. Most projects or assignments will utilize three or four SLOs at most. Choose the SLOs that are most pertinent to your assignments or projects when utilizing this rubric. This tool was contributed by Carol Thurman and Owen Cantrell |
| **INSTRUCTIONS**1. Review the [SOLO Taxonomy PowerPoint](https://www.dropbox.com/s/puri4xcm7twra8p/SOLO_Taxonomy_PowerPoint.pptx?dl=0) to learn about using the SOLO Taxonomy to assess SLOs.
2. Watch the [interview with Ben B. Yang of GTRI](https://www.youtube.com/watch?v=iM9kEYPp7jQ&feature=youtu.be) regarding how he used the SOLO Taxonomy to assess SLOs in his electromagnetics course (link to video).
3. Before using the rubric for your assignment or project, choose the selected SLOs that your assignment or project assesses.
4. Utilize these sections in the SOLO Taxonomy Rubric to note changes in structural student knowledge.
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| SLS STUDENT LEARNING OUTCOMES & ASSESSMENT The Serve-Learn-Sustain toolkit teaching tools are designed to assist you in gauging student progress toward not only SLS student learning outcomes (SLOs), but the unique learning outcomes for your own courses. Reflection, concept maps, rubrics, and other assessment methods are shown to improve student learning. For resources on how to assess your students’ work, please review our Assessment Tools at <http://serve-learn-sustain.gatech.edu/tool-category/assessment>.  |

**Want Help?**

Carol Thurman is the contact for this tool. You can reach her at carol.thurman@gatech.edu

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| SLO Outcome | **SOLO Stage 1: Pre-Structural** | **SOLO Stage 2 &3: Uni- & Multi-structural** | **SOLO Stage 4: Relational** | **SOLO Stage 5: Extended Abstract** |
| **SLO 1: Sustainability Awareness** | No identification of ecological, social, and economic systems and the relationships among them. Minimal understanding of sustainability and relationship between ecological, social, and economic systems. | Minimal identification of ecological, social, and economic systems. Ecological, social, and economic systems are identified as independent or unrelated to one another.  | Robust identification that ecological, social, and economic systems are part of an overall structure and interrelated. Student situates identification within the context of the course.  | Identifies stage 4 in the context of the course that can transfer to other contexts.  |
| **SLO 2: Describe How Actions Impact Sustainability.** | No description of how their individual actions impact the sustainability of communities.  | Minimal description of how individual actions impact the sustainability of communities.  | Robust description of how individual actions impact the sustainability of communities. Student situates description within the context of the course.  | Describes stage 4 in the contexts of the course that can transfer to other contexts. |
| **SLO 3: Develop Skills Necessary to Work Effectively in different types of Communities.** | No demonstration of skill development necessary to work effectively in a community.  | Minimal demonstration of skills necessary to work effectively in different types of communities. Student does not connect skills to application during community engagement work.  | Robust demonstration of skills necessary to work effectively in different types of communities that connects to practical application during community engagement work. Student situates demonstration within the context of the course. | Demonstration of stage 4 in the contexts of the course that can transfer to other contexts.  |
| **SLO 4: Evaluate How Decisions Impact the Sustainability of Communities** | No evaluation of how decisions impact the sustainability of communities.  | Minimal evaluation of how decisions impact the sustainability of communities. Student does not link to decisions that impact the sustainability of communities to individual or social decision making.  | Robust evaluation of how decisions impact the sustainability of communities that is linked to individual or social decision making. Student situates evaluation within the context of the course. | Evaluation of stage 4 in the contexts of the course that can transfer to other contexts |
| **SLO 5: Describe How to Use Discipline to Make Communities More Sustainable** | No description of how to use discipline to make communities more sustainable  | Minimal description of how to use discipline to make communities more sustainable. Student does not connect description to professional practice.  | Robust description of how to use discipline to make communities more sustainable and connects to professional practice. Student situates description within the context of the course. | Describes stage 4 in the contexts of the course that can transfer to other contexts. |
| **SLO 6: Develop Approaches to Sustainability**  | No development of approaches to sustainability and community-level needs.  | Minimal development of approaches to sustainability. Student does not put approaches in in context with community-level needs.  | Robust development of approaches to sustainability that is situated firmly within context to community-level needs. Student situates development of approaches within the context of the course. | Development of stage 4 in the contexts of the course that can transfer to other contexts. |
| **SLO 7: Communicate Effectively with the Public** | No effective communication with the public around creating sustainable communities.  | Minimal effective communication with the public. Student does not consider ways to address these audiences around creating sustainable communities | Robust effective communication with the public that considers ways to address these audiences around creating sustainable communities. Student situates communication of the development of approaches within the context of the course.  | Communication of stage 4 in the contexts of the course that can transfer to other contexts. |
| **SLO 8: Develop and Manifest Personal Values and Beliefs**  | No development and manifestation of personal values and beliefs consistent with their role as responsible community members.  | Minimal development and manifestation of personal values and beliefs. Student does not relate values to their role as responsible community members.  | Robust development and manifestation of personal values and beliefs as related to their role as responsible community members. Student situates development and manifestation of personal values and beliefs within the context of the course.  | Development and manifestation of stage 4 in the contexts of the course that can transfer to other contexts. |

Rubric Key:

Student Learning Outcomes

**Develop Skills and Knowledge**

SLO 1: Students will be able to identify relationships among ecological, social, and economic systems.

SLO 2: Students will be able to describe how their actions impact the sustainability of communities.

SLO 3: Students will be able to demonstrate skills needed to work effectively in different types of communities.

SLO 4: Students will be able to evaluate how decisions impact the sustainability of communities.

**Connect to Professional Practice**

SLO 5: Students will be able to describe how they can use their discipline to make communities more sustainable.

**Put Knowledge and Skills into Action**

SLO 6: Students will be able to develop approaches to sustainability challenges in communities.

SLO 7: Students will be able to communicate effectively with the public about creating sustainable communities.

**Build Long Lasting Values and Beliefs**

SLO 8: Students will develop and manifest personal values and beliefs consistent with their roles as responsible members of local, national, international, and/or professional communities.

SOLO (Structure of Observed Learning Outcomes) Taxonomy\*

SOLO Stage 1: Pre-Structural: Student demonstrates no understanding of the desired learning.

SOLO Stage 2 & 3: Uni- & Multi-Structural: Student demonstrates understanding of one or more relevant items, but items are seen as independent or unrelated to each other.

SOLO Stage 4: Relational: Items are described as part of an overall structure and as being interrelated (not necessarily a greater number of items nominated than in multi-structural)

SOLO Stage 5: Extended Abstract: Items are described as part of an overall structure, and elements of the structure are seen to be applicable in other situations (i.e. transferable or generalizable).

\*from “Exploring Student Sustainability Knowledge using the Structure of Observed Learning Outcomes (SOLO) Taxonomy” by Dr. Mary Katherine Watson, Joshua Pelkey, Dr. Michael Owen Rodgers, and Dr. Caroline Noyes

SLS Student Learning Outcomes

**Goal: Develop Skills & Knowledge**

1. Identify relationships among ecological, social, and economic systems
2. Describe how actions affect community sustainability
3. Work effectively in different communities
4. Analyze the impact of decisions on community sustainability

**Goal: Connect to Professional Practice**

1. Relate discipline to community sustainability

**Goal: Put Knowledge & Skills into Action**

1. Create and evaluate approaches to addressing community sustainability
2. Communicate with the public about sustainable communities

**Goal: Build Long-Lasting Values and Beliefs**

1. Manifest personal values and beliefs demonstrating responsible community membership