



New Program Assessment Foundations

The purpose of the new program assessment foundations (NPAF) document is to assist faculty with developing new programs or, in some cases, programs that are undergoing a significant restructuring/revision. The assessment foundations document focuses on three critical areas – the mission statement, developing student learning outcomes, and the curriculum map. The mission statement defines the essential purpose of the program. The student learning outcomes describe the learning themes and cognitive development contained within the curriculum. And the curriculum map is a visual presentation of how the courses function to provide both unique and reinforcing learning opportunities.

Together, these three elements function to bring coherence to an academic program, and it also provides a smoother transition when developing assessment activities. The NPAF is part of a larger *TCNJ Assessment Guide* which is available upon request from the *Center for Institutional Effectiveness (CIE)*. If you have any additional questions, feel free to contact CIE and Dr. LaMont Rouse at rousel@tcnj.edu for assistance.

Mission Statement

The first foundation block of academic assessment is the program's mission statement. A mission statement is a written declaration of the program's unique focus with three key components – primary functions, purpose, and stakeholders. Without a well-defined and *measurable* mission statement, academic programs are likely to encounter significant problems when identifying their primary student learning outcomes. Below are three examples of a mission statement for a **Hypothetical** Applied Sociology Program.

Examples of program mission statements:

Poor: *The mission of the Applied Sociology program is to provide a broad sociology education.*

The statement is very vague and does not distinguish this particular program from other sociology programs. It lacks information about the primary functions of the program and does not identify the stakeholders. Additionally, there is no indication that the program's mission is aligned with TCNJ's mission.

Better: *The mission of Applied Sociology is to educate students from diverse backgrounds in the principles of Hypothetical Applied Sociology that will prepare them for both current and future professional challenges in Hypothetical Applied Sociology.*

This statement is better because it identifies the stakeholders and the primary function of the program; however, it still is not a distinctive statement.

Best: *The mission of the Applied Sociology bachelor's degree program is to educate students from diverse backgrounds in the fundamental skills, knowledge, and practice of Hypothetical Applied Sociology (through courses and an internship) in order to 1) prepare them for Hypothetical Applied Sociology positions in the nonprofit and public sectors and 2) prepare them to pursue advanced degrees in Hypothetical Applied Sociology or related disciplines. The program promotes commitment to continued scholarship and service among graduates and will foster a spirit of innovation. Also, it promotes an environment that is inclusive and diverse.*

Student Learning Outcomes

Assessment begins with each academic department defining its *primary student learning outcomes* (SLOs). While, admittedly, a program could have dozens of learning outcomes, it is important to have consensus on the primary student learning outcomes. Primary student learning outcomes are representative, but by no means exhaustive, of all learning within a program. Each academic program should have no fewer than four but no more than eight SLOs. The SLOs represent what students will be able to know and do at the time of degree completion. Once those SLOs have been defined, the process of assessment can be planned. Such planning includes identifying the educational experiences through which the student achieves the learning outcomes.

Below is an example of student learning outcomes from a B.S. in Accounting at Kansas State:

It is our expectation that upon degree completion from the Department of Accounting, students will have these characteristics:

- *Students will possess adequate technical knowledge of accounting and related disciplines to enter the accounting profession.*
- *Students will be able to combine critical thinking skills (disciplined and creative thinking) and technical knowledge to solve problems in a constantly changing professional environment.*
- *Students will have adequate knowledge of the ethical standards of the accounting profession and be able to exercise ethical awareness.*
- *Students will be effective and productive members of project teams.*
- *Students will be able to verbally express themselves in both formal presentations and informal dialogue.*
- *Students will have the ability to write clearly and concisely.*
- *Students will be able to apply computer skills to retrieve and manage information in an accounting environment.*
- *Students will know the origins of accounting and its importance to society.*

Bloom’s Taxonomy

Bloom’s taxonomy of cognitive objectives, originated by Benjamin Bloom and collaborators in the 1950s, identifies several categories of cognitive learning.

Figure 1: Bloom's Taxonomy & Descriptive Verbs

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
LESS COMPLEX			MORE COMPLEX		
To know facts, terms, concepts, principles, or theories; to remember previously learned information.	To understand, interpret, compare and contrast, explain; management of knowledge.	To apply knowledge to new situations, to solve problems; use of comprehension or understanding.	To identify the organizational structure of something; to identify parts, relationships, and organizing principles.	To create something, to integrate ideas into a solution, to propose an action plan.	To judge the quality of something based on its adequacy, value, logic, or use; appraisal of own or someone else’s analysis or synthesis.
Cite Count	Arrange Associate	Apply Calculate	Analyze Appraise	Arrange Assemble	Appraise Assess

Define	Classify	Change	Break down	Categorize	Choose
Draw	Compare	Classify	Calculate	Collect	Compare
Identify	Compute	Demonstrate	Categorize	Combine	Conclude
Indicate	Contrast	Determine	Classify	Compile	Contrast
List	Differentiate	Discover	Compare	Compose	Criticize
Match	Discuss	Dramatize	Debate	Construct	Decide
Memorize	Distinguish	Employ	Deconstruct	Create	Discriminate
Name	Estimate	Illustrate	Determine	Design	Estimate
Point	Explain	Interpret	Diagram	Devise	Evaluate
Quote	Express	Investigate	Differentiate	Explain	Explain
Read	Extrapolate	Locate	Distinguish	Formulate	Grade
Recite	Give examples	Manipulate	Examine	Generate	Interpret
Record	Infer	Operate	Experiment	Manage	Judge
Repeat	Locate	Order	Identify	Modify	Justify
Select	Outline	Organize	Illustrate	Organize	Measure
State	Paraphrase	Practice	Inspect	Perform	Rate
Tabulate	Predict	Report	Inventory	Plan	Relate
Tell	Report	Restructure	Outline	Prepare	Revise
Trace	Restate	Schedule	Question	Produce	Score
Underline	Review	Sketch	Relate	Propose	Select
	Suggest	Solve	Select	Rearrange	Summarize
	Summarize	Use	Solve	Reconstruct	Support
	Tell	Write	Test	Relate	Validate
	Translate	Translate		Revise	Value
		Use			

Bloom's Taxonomy Continued

Category	Description
Knowledge	Ability to recall previously learned material
Comprehension	Ability to grasp meaning, explain, and restate ideas
Application	Ability to use learned material in new situations
Analysis	Ability to separate material into component parts and show relationships between parts
Synthesis	Ability to put together separate ideas to form a new whole, establish new relationships
Evaluation	Ability to judge the worth of material against stated criteria

Using Bloom

Bloom's taxonomy can be used as a hierarchical model of learning, with categories such as knowledge and comprehension representing basic learning objectives, and synthesis and evaluation equating more complex learning modes. A curriculum map represents a development matrix of learning within an academic program; the early courses introduce the primary SLOs. It is through repetition and the reinforcement of the SLOs in subsequent courses that proficiency and mastery are achieved. Student learning outcomes that are contained solely in one course probably do not rise to the level of a primary learning objectives for a program; therefore, these SLOs should not be listed as program goals. The primary student learning outcomes should appear in no fewer than two and perhaps as many as five or six courses in order to be certain that students have reached a level where they can use and apply the theory, skill, knowledge, etc. The verbs associated with Bloom's taxonomy provide a framework for writing/developing SLOs, and can serve as a guide for faculty on what students are accomplishing in the course relative to the cognitive development map. There are a few alternatives to Bloom's taxonomy along with an emerging Bloom's revised list which can also help prioritize and describe hierarchical learning within a program.

Curriculum Maps

Central to the process of linking the primary student learning outcomes with the courses offered in the major is the use of the curriculum map. In these courses, one or more SLOs are being advanced at varying levels. In the early stages of the major, the SLOs are introduced. During the intermediate stages of the discipline, various courses reinforce and advance students' knowledge and skills in each SLO, and finally, students achieve mastery/proficiency in all primary SLOs by the time of the culminating experience or capstone course. The curriculum map shows that courses are not merely amalgams of various corners of a discipline, but build on the core knowledge and skill sets required.

Finally, a word about the "mastery/proficiency" that must be achieved upon time of degree completion: By mastery/proficiency, a program is not making a claim that a student has become a master-level student, but that, appropriate to the degree requirements, students are proficient in the discipline. Below, please find a sample of a curriculum map.

Program Name—B.A. in Political Science (Sample)

The B.A. in political science prepares students to achieve the expected student learning outcomes identified by the program or discipline. The following table demonstrates how learning activities in specific courses map to these learning outcomes.

Key: I-Introduced R-Reinforced M-Mastery A-Assessment evidence collected

Figure 2: Sample of a Curriculum Map

Required Courses	SLO #1	SLO #2	SLO #3	SLO #4	SLO #5	SLO #6
PS 1010	I		I	I		I
PS 2100		I		R	I	
PS 2300	R	R				R
PS 2400		R	R	R		
PS 3200 - 3230	R	R		R		R
PS 3240	R/M	R		R/M		R/M
PS 3250		R/M	R/M		R/M	
PS 4130	M, A	M, A	M. A	M. A	M, A	M, A