

Chapter 8.

Tying Down the Assessment Domain

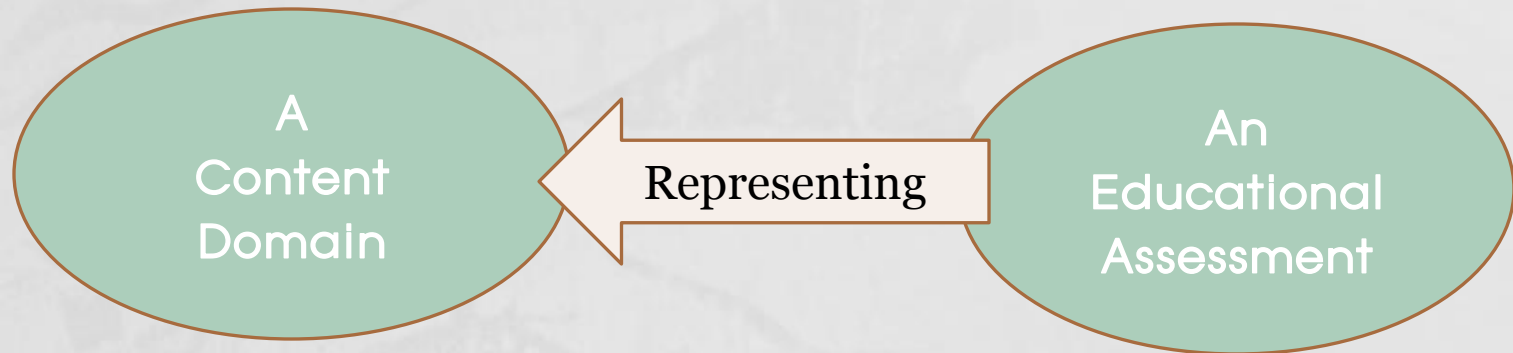
Contents

- Circumscribing What Is To Be Measured
- Assessment Domain Definitions as Instructional Facilitators
- Focusing on Assessment-Based Inferences

Importance of Domain Descriptions

An assessment domain

: a description of the body of skills, knowledge, or affect to be represented by an assessment device.



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Assessment
Domains

Target
Instructional
Domains

Content
Domains

Test
Specifications

Test-item
Specifications

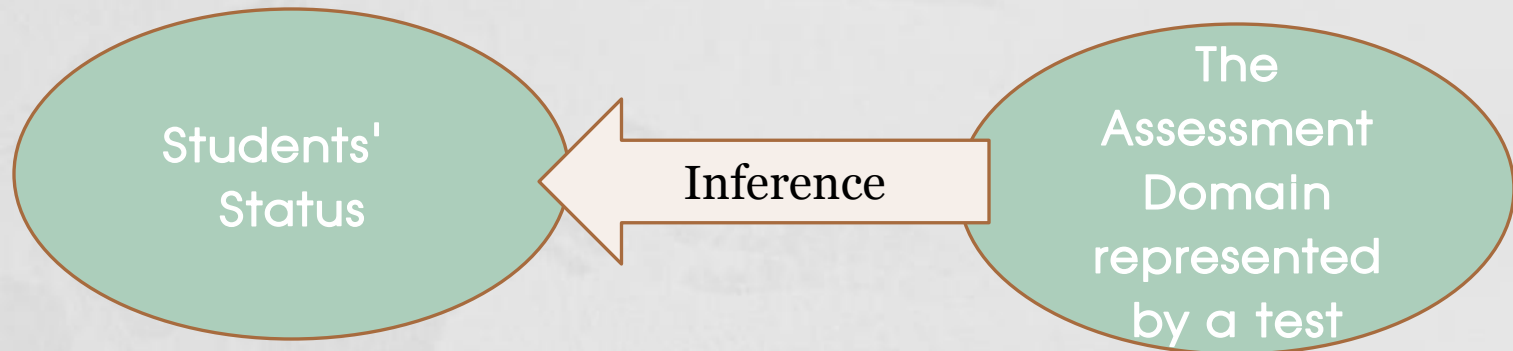
Test
blueprints

Importance of Domain Descriptions

Why Important?

Why to circumscribe?

: Test-based inferences about students center directly on their status in relation to the assessment domain represented by a test.



Traditional Domain Descriptions

Synonym of Domain Descriptions

- 1) Test specifications
: The rules governing the allocation of certain kinds of items in a test.
- 2) Test-item specifications
: The rules governing the construction of a test's items.
- 3) Test blueprints

4.2 Test Specifications

Test specifications are a blueprint, or plan, that clearly defines the scope and content of the test. It is the documentation for the decisions made in the initial planning stages. Just as it is important to develop learning objectives before instruction is planned, it is necessary to develop test specifications prior to test construction.

The development of test specifications is a vital step in the testing process. Test specifications provide two important checks on the entire test mechanism. They are:

- C An explicit, documented link between each test item and a learning objective that is verified to be relevant, important, and based on the task
- C Consistency in the way tests are developed at a facility.

Consistency will assist in reducing biases in test content due to instructor likes and dislikes or the changing of personnel at the facility. The process ensures all decisions for job placement are based on trainee performance on the same body of knowledge and ability, even though specific topics covered on individual tests may differ.

Goals	Objectives	Items Selected to Assess Knowledge Objectives	Items Selected to Assess	Items Selected to Assess	Items	Items	Items	Weighting	
			Comprehension Objectives	Application Objectives	Selected to Assess	Selected to Assess	Selected to Assess		
					Analysis Objectives	Synthesis Objectives	Evaluation Objectives		
Goal 1: The students will know...	Objective 1-1: Name...	supplied response						1	
	Objective 1-2: List...	matching, true/false						1	
Goal 2: The students will use...	Objective 2-1: Translate...							supplied response	1
	Objective 2-2: Practice...							multiple choice	2
Goal 3: The students will create...	Objective 3-1: Produce...							performance assessment	3
Goal 4: The students will rate...	Objective 4-1: Assess...							interpretive exercise	3
	Objective 4-2: Choose...							interpretive exercise	2

Traditional Domain Descriptions

Practical constraints

- 1) the length of time
- 2) The problems of scoring
- 3) The problem of test security
(extent, difficulties)
- 4) A time-limited test(a speeded test)
- 5) Requirement of resources
- 6) Accommodations for disabled students

Traditional Domain Descriptions

A Range of Assessment Options

Many educators do not think of diverse measurement approaches, such as

- ① multiple-choice items,
- ② short-answer items,
- ③ matching items,
- ④ binary-choice items,
- ⑤ essay items,
- ⑥ variations and combinations of these item types.

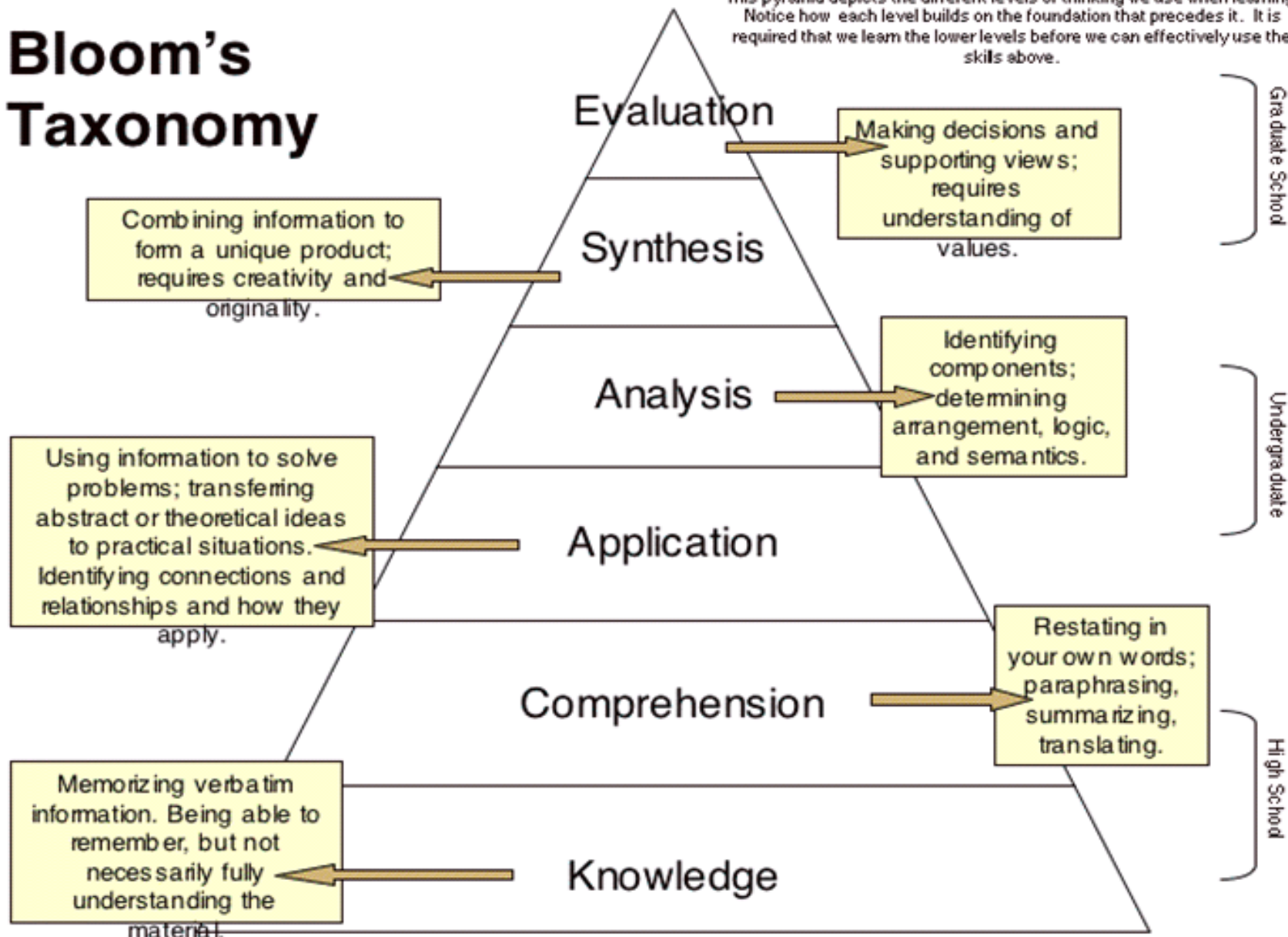
Traditional Domain Descriptions

Domain-definition approaches

- 1) Two-way grids
: an assessment-domain definition citing content according to the cognitive level measured and the number of items for each.

Bloom's Taxonomy

This pyramid depicts the different levels of thinking we use when learning. Notice how each level builds on the foundation that precedes it. It is required that we learn the lower levels before we can effectively use the skills above.



Traditional Domain Descriptions

Domain-definition approaches

- 1) Two-way grids
: an assessment-domain definition citing content according to the cognitive level measured and the number of items for each.

Let's take a look at the textbook page 209 and 210.

Traditional Domain Descriptions

Domain-definition approaches

1) Two-way grids

: an assessment-domain definition citing content according to the cognitive level measured and the number of items for each.

-grids can be more or less fine-grained

ex) “recall” or “beyond recall”

-time of to create specifications is **before** the test is put together

Traditional Domain Descriptions

Domain-definition approaches

2) Content or skill listings

: An assessment domain definition listing the assessable knowledge or skills along with the number of items for each.

Traditional Domain Descriptions

Domain-definition approaches

3) Teacher simplification

: substantial simplifications of the kinds of two-way grids or skill/content listings

-Most teachers have neither the time nor the inclination to engage in complex activities

Summary!

– Circumscribing What's To Be Measured

1. Importance	• Definition	Skills, knowledge and affect
	• Synonyms	✓ Target instructional domains ✓ Content domains
	• Important	✓ To make inference
2. Tradition	• Synonyms	✓ Test specifications ✓ Test-item specifications ✓ Test blueprints
	• Constraints	✓ The length of time ✓ The problems of scoring ✓ The problems of test security ✓ and so on
	• Types of domain-definition approaches	✓ Two-way grids ✓ Content or skill listings ✓ Teacher simplifications

Assessment domains function as instructional facilitators

- ❖ Three obvious dividends from well-defined assessment domains

Teachers will

- (1) Carry out more accurate task analysis
 - (2) Provide more relevant practice opportunities to students
 - (3) Supply more effective explanations
- > Circumscribe the content to be assessed as well as an indication of the eligible types of test items

Assessment domains function as instructional facilitators

		Clarity of Assessed Content	
		Clear	Unclear
Importance of Results	High stakes	Substantial Impact	No Impact
	Low stakes	Meaningful Impact	No Impact

Assessment domains for diverse instructional outcomes

- ❖ Cognitive skills assessed via performance tests
- ❖ Cognitive skills assessed by selected-response tests
- ❖ Knowledge assessed by selected-response or constructed-response tests
- ❖ Affect assessed by student self-report inventories
- ❖ Clarity of intention as the key

Cognitive skills assessed via performance tests

- ✓ Best assessment approach is a performance test
- ✓ Performance tests present students with a task, then judge the adequacy of their performance of that task
- ✓ Two important components of an assessment-domain description for a performance tests
 1. Delineation of the kinds of tasks
 2. Evaluative procedures -> **Rubric**

Cognitive skills assessed selected-response tests

- ✓ Provide teachers with a clear idea of what a test item might be like (stimulus section of an item and its potential response options)
- ✓ Help teachers obtain an accurate picture of what's expected of students

Knowledge assessed by selected-response or constructed-response

- ✓ List of vocabulary words
- ✓ Spelled-out set of the most important facts
- > These examples will give you an idea about the chunks of relatively homogeneous information that educators would like students to be able to recall

Knowledge assessed by selected-response or constructed-response

1. Dream up a few questions

(T/F, Multiple-choice, or short-answer items)

2. See how well students do when answering those questions

Affect assessed by student self-report inventories

- ✓ Contain a description of the pivotal concepts
- ✓ All that's missing in the definitions of an affective assessment domain is a brief form in the inventory
- ✓ Teachers have a clear idea, so they can devise suitable activities to help students acquire the desired affect

Clarity of intention as the key

- ✓ The more clearly that teachers understand the kinds of outcomes, the more likely the effective instruction will be provided to those students
- ✓ Assessment domains should always be generated prior to the teacher's instructional planning

Focusing on assessment –based inferences

- ✓ Orient around the inference to be drawn from the student's test performance
- ✓ The inference-focus approach should be employed for affective assessment and psychomotor assessments



Thank you.