

## Performance Assessment

4000 years ago, Chinese Civil Service Testing was performance based

776 BC: formal athletic competitions were held in Greece

### Analytic Scoring

Profiling strengths and weaknesses in specified areas

### Assessment Center

Simulations

### Authentic Assessment

Testing that is anchored in the kind of work real people do; is realistic, requires judgment and innovation, and asks the student to "do" the subject

### Benchmark

Referenced behavior for comparing performance to rubric scores

### Cognitive complexity

Requires analysis of specific skills and processes actually used by individuals

### Halo effect

Basing judgements on selected pieces of information rather than all relevant information

### High inference

Types of items and tasks, judgments, decisions based on complex reasoning requiring a high degree of subjectivity

### Holistic scoring

A single score reflecting overall impression

### Low inference

Require a low degree of subjectivity

### Range finders

Set of benchmarks consisting of one or more representative examples or typical responses for each scoring point or performance level

### Rater drift

Tendency for raters to unintentionally redefine criteria over time, across a series of ratings

### Scoring rubric

Set of rules, guidelines or benchmarks at different levels of performance

### On demand

Requirement to participate in a prescheduled test session, generally externally imposed

### Embedded

Incorporated into the regular instructional process, to promote or evaluate learning

**PERFORMANCE ASSESSMENT BLUEPRINT**

Step 1: Clarify reason(s) for assessment

- A. Specify decision(s) to be made \_\_\_\_\_
- B. Specify decisionmaker(s) \_\_\_\_\_
- C. Specify use to be made of results  
 Mastery                       Rank order                       Combination
- D. Students to be assessed  
 How many? \_\_\_\_\_                      What grade level? \_\_\_\_\_  
 Unique characteristics? \_\_\_\_\_

Step 2: Clarify performance to be evaluated

- A. Specify the content or skill focus of the assessment \_\_\_\_\_
- B. Select type of performance to be evaluated  
 Process; identify process \_\_\_\_\_  
 Product; identify product \_\_\_\_\_  
 Combination; identify each in spaces provided above
- C. List performance criteria

Factor	Meaning	Continuum

Step 3: Design exercises

- A. Select form of exercises  
 Structured exercises; devise sample exercise \_\_\_\_\_  
 Natural events; describe events to be observed \_\_\_\_\_  
 Combination; devise sample exercise and describe events in spaces provided above.
- B. Determine obtrusiveness of assessment  
 Examinees aware of assessment                       Examinees unaware of assessment                       Combination
- C. Determine amount of evidence needed  
 1 sample, 1 time                       Multiple samples, 1 time                       Multiple samples over time

Step 4: Design performance rating plan

- A. Determine type of score needed  
 Holistic                       Analytic                       Combination
- B. Determine who is to rate performance  
 Teacher                       Self-rating                       Combination  
 Other expert                       Peer-rating
- C. Clarify score recording method  
 Checklist                       Anecdotal record                       Combination (specify)  
 Rating scale                       Portfolio

National Board of Professional Teaching Standards  
*National Board Certification Process*

<http://www.nbpts.org>

*Developing Standards*

1. Appoint a standards committee
2. Committees develop standards
  - ◆ Highlight specific aspects of teaching that reflect accomplished practice, while emphasizing the holistic nature of teaching
  - ◆ Describe how the standard comes to life in different settings
  - ◆ Identify the knowledge, skills and dispositions that support a teacher's performance at a high level
  - ◆ Show how a teacher's professional judgment is reflected in observable actions
  - ◆ Reflect the five propositions in the policy statement: What teachers should know and be able to do.
3. The standards are publicly reviewed
  - ◆ Core professional knowledge
  - ◆ Developmental specific knowledge
  - ◆ Depth and breadth of content and discipline area knowledge
  - ◆ Pedagogical content knowledge

*Developing the Portfolio*

Elements of the portfolio are designed to meet aspects of the standards.

Classroom based exercises

Videotapes of classroom interactions or discussions

Collections of student work

Written analysis of teaching reflected in the videotape or student work

Five months are between when portfolio directions are given and deadline for submission

A good portfolio will both reflect the standards and give a true picture of a teacher's level of accomplishment.

### *Implementation of the Portfolio*

1. National Board Certification must be voluntary.
2. Certification must be accessible to all eligible persons.
3. National Board Certification must be viewed not simply as an end in itself, but as a means for enhancing opportunities for teachers to continue to hone their professional skills.
4. Processes leading to National Board Certification must stress equity and diversity.
5. Rewards and incentives attached to national Board Certification must be appropriate and adequate.

### *Assessment Center Exercises*

Teacher candidates complete written tasks and exercises focused on pedagogical content and knowledge. Candidates write to specific prompts; exercises simulate situations to which teachers must respond.

A full day consists of four, 90-minute sessions.

### *Scoring*

Portfolio entries and assessment center exercises are scored by trained teachers and National Board Certified teachers.

Teachers are trained to identify benchmarks and range finders.

A separate group of teachers are then trained to use benchmarks to aid in scoring portfolio entries. These teachers continue on in scoring portfolio entries in small groups with a leader that monitors the scoring process and contributes scores when raters differ greatly.

Directions for portfolio entries and assessment center exercises contain explanations of how they will be scored.

Scores on individual entries are banked for three years. Candidates can retake any of the entries to contribute to rescoring.

**Adolescence and Young Adulthood Mathematics**  
**Entry 2 – Analysis of Student Work: Assessment**

**Scoring Rubric**

**Level 4:**

**The 4 level performance provides clear, consistent, and convincing evidence that the teacher is able to build students' understanding of important mathematical concepts through the use of assessment that furthers learning goals, enhances instruction, and allows students to demonstrate their abilities to think and reason mathematically.**

The 4 level performance provides clear, consistent, and convincing evidence that the teacher sets well-defined, worthwhile, and appropriate goals for student learning and connects instruction and assessment to those goals. There is clear, consistent, and convincing evidence that the teacher is able to design, select, or adapt an assessment that furthers learning goals and enhances instruction, differentiates among learners, elicits mathematical reasoning and thinking, and communicates high and appropriate goals. The teacher's rationale for the form and content of the assessment is strong and convincing, given her/his instructional context and the stated goals for these students. There is clear, consistent, and convincing evidence that the assessment elicits student performance that reveals essential information about student achievement of the learning goals and each student's ability to think and reason mathematically with regard to the featured mathematical concept(s). The 4 level response offers clear, consistent, and convincing evidence that the teacher is able to accurately describe, analyze, and evaluate each student's response to the assessment in light of the learning. The teacher's deep knowledge of students is demonstrated by a well-differentiated understanding of each student as a learner of mathematics. There is clear, consistent, and convincing evidence that the teacher is able to provide instructive and appropriate feedback to each student and to articulate clear and appropriate next steps for each student, given their responses to the assessment. There is clear, consistent, and convincing evidence of the teacher's own deep knowledge of mathematics. The 4 level response offers clear, consistent, and convincing evidence that the teacher is able to describe his or her practice accurately, analyze it fully and thoughtfully, and reflect on its implications and significance for future teaching. Overall, there is clear, consistent, and convincing evidence that the teacher is able to build students' understanding of important mathematical concepts through her or his use of assessment.

**Level 3:**

**The 3 level performance provides clear evidence that the teacher is able to build students' understanding of important mathematical concepts through the use of assessment that furthers learning goals, enhances instruction, and allows students to demonstrate their abilities to think and reason mathematically.**

The 3 level performance provides clear evidence that the teacher sets worthwhile and appropriate goals for student learning and connects instruction and assessment to those goals. There is clear evidence that the teacher is able to design, select, or adapt an assessment that furthers learning goals and enhances instruction, differentiates among learners, elicits mathematical reasoning and thinking, and communicates high and appropriate goals. The teacher's rationale for the form and content of the assessment is convincing, given her/his instructional context and the stated goals for these students, though the rationale may not be as strong or clearly articulated as in a 4 level response. There is clear evidence that the assessment elicits student performance that reveals essential information about student achievement of the learning goals and each student's ability to think and reason mathematically with regard to the featured mathematical concept(s). The 3 level response offers clear evidence that the teacher is able to accurately describe, analyze, and evaluate each student's response to the assessment in light of the learning goals, though the analysis may not be as deep or as detailed as in a 4 level response. The teacher's knowledge of students is demonstrated by a differentiated understanding of each student as a learner of mathematics, though the level of differentiation may not be as great as in a 4 level response. There is clear evidence that the teacher is able to provide appropriate feedback to each student and to articulate clear and appropriate next steps for each student, given their responses to the assessment. The feedback to students may not be as detailed, copious, or instructive as in a 4 level response. There is clear evidence of the teacher's own knowledge of mathematics. The 3 level response offers clear evidence that the teacher is able to describe his or her practice accurately, analyze it thoughtfully, and reflect on its implications and significance for future teaching. However, the reflection may not be as detailed or insightful as in a 4 level response. A 3 level performance may show imbalance in the different sources of evidence or in different parts of the analysis. One part of the response may be more indicative of accomplished practice than another, but viewed as a whole, there is clear evidence that the teacher is able to build students' understanding of important mathematical concepts through her or his use of assessment.

**Level 2:**

**The 2 level performance provides limited evidence that the teacher is able to build students' understanding of important mathematical concepts through the use of assessment that furthers learning goals, enhances instruction, and allows students to demonstrate their abilities to think and reason mathematically.**

The 2 level performance provides limited evidence that the teacher sets appropriate goals for student learning and connects instruction and assessment to those goals. The goals for student learning may be vague, of limited significance, or only loosely related to the instruction. There is limited evidence that the teacher uses an assessment that enhances instruction and elicits mathematical reasoning and thinking from students. The teacher's rationale for the form and content of the assessment may be somewhat weak or unclear. There is limited evidence that the assessment elicits student performance that reveals information about student achievement of the learning goals and each student's ability to think and reason mathematically with regard to the featured mathematical concept(s). The assessment may emphasize computational or procedural skills over conceptual mathematical understandings. The 2 level response offers limited evidence that the teacher is able to describe, analyze, and evaluate each student's response to the assessment. The analysis of the student responses may consist largely of what each student got "right" and "wrong." There may be only limited evidence of the teacher's knowledge of students and insight into their learning, with little differentiation among learners. There is limited evidence that the teacher is able to provide appropriate feedback to each student; feedback may not be instructive or focused on mathematics. The next steps articulated by the teacher may show only minimal recognition of individual students' accomplishments and needs or may not reflect the student's response to the assessment. There is limited evidence of the teacher's own knowledge of mathematics. The 2 level performance offers limited evidence of the teacher's ability to engage in reflective thinking about students or his/her instruction. The reflection may be global or sketchy and show limited understanding of implications for future teaching. The 2 level performance may be characterized by evidence that hints at accomplished practice, but overall, there is limited evidence that the teacher is able to build students' understanding of important mathematical concepts through her or his use of assessment.

**Level 1:**

**The 1 level performance provides little or no evidence that the teacher is able to build students' understanding of important mathematical concepts through the use of assessment that furthers learning goals, enhances instruction, and allows students to demonstrate their abilities to think and reason mathematically.**

The 1 level performance provides little or no evidence that the teacher sets appropriate goals for student learning and connects instruction and assessment to those goals. The goals for student learning may not be goals at all, but rather activities. When stated, goals are vague, trivial, inappropriate, or unconnected to instruction. There is little or no evidence that the teacher uses an assessment that enhances instruction or elicits mathematical reasoning and thinking from students. The teacher's rationale for the form and content of the assessment may be missing or very weak. There is little or no evidence that the assessment elicits student performance that reveals information about student achievement of the learning goals or each student's ability to think and reason mathematically with regard to the featured mathematical concept(s). The assessment may require students to simply recall information and/or substitute numbers into equations. Or, it may not require students to supply information about the mathematical processes they used to arrive at an answer. The 1 level response offers little or no evidence that the teacher is able to describe, analyze, and evaluate each student's response to the assessment. The analysis of the student responses may consist solely of what each student got "right" and "wrong," or may focus on criteria outside the stated learning goals. There may be little or no evidence of the teacher's knowledge of students and insight into their learning, with little or no differentiation among learners. The analysis may treat the students as a group, or there may be no indication as to whether the students learned what the teacher wanted them to learn. There is little or no evidence that the teacher is able to provide appropriate feedback to each student; feedback may be minimal, absent, or incorrect. The teacher may fail to articulate next steps; if they are articulated, they do not offer ways for students to build on what they know. There is little or no evidence of the teacher's own knowledge of mathematics; there may be evidence of serious misconceptions about mathematics on the teacher's part. The 1 level performance offers little or no evidence of the teacher's ability to engage in reflective thinking about students or his/her instruction. The reflection may be missing or unconnected from the instructional evidence and show little or no understanding of implications for future teaching. Overall, there is little or no evidence that the teacher is able to build students' understanding of important mathematical concepts through her or his use of assessment.