Meaningful Learning  
For All Students  
by Jay McTighe

When I think of accountability, I think of two questions: (1) Accountable for what? and (2) According to what measures? State and district content standards have attempted to define the “accountable for what” by specifying what students should know and be able to do. The “by what measures” question is addressed through assessment. I will offer some thoughts about both content standards and assessments in terms of their implications for meaningful learning.

What do we know about learning, from the research and experience? We know that certain variables influence students’ willingness to put forth effort. I will touch on three:

1. the clarity of the learning goals and tasks;
2. the extent to which the learning goals/tasks are seen as useful, relevant, purposeful from the student’s perspective; and
3. students’ beliefs regarding their potential for success

1. Learners need to know what the goals are and they need to know what is expected of them. With clear goals and tasks, there is a greater likelihood that students are going to take work seriously and put forth effort—more so than if they don’t know what the goals are or what they are being expected to do.

2. Learners who see a purpose, relevance, and meaningfulness in the goals and the tasks they’re being asked to perform are more likely to put forth effort. Connection to a clear purpose, either now or in the future, is significant, and that purpose needs to make sense to students—not just what adults say you have to learn or what the state standards say you need to know.

3. Students attribute their success or failure in school to specific factors. A body of research known as attribution theory has explored the question – to what factors do students attribute their potential to be successful in school? It turns out that some students attribute success to internal factors. These students recognize that hard work, attentiveness to goals, awareness of evaluative criteria, use of strategies, and persistence are the qualities that promote learning and success in school. Other (less successful) students attribute success to external factors, such as their gene pool. For example, my wife is an art teacher, and she gets frustrated when some of her kids say, “Nobody in my family can draw.” The implication is, “I can’t draw either, therefore I’m not going to even try since I don’t believe I’ll ever be able to draw well.”

In one study, elementary students were asked what they think makes so and so a good student. Some of the kids said things like, “They’re lucky. They picked the right answers on the test.” Or “The teacher likes them, but not me.” In other words, they attributed academic success to things beyond their control.

We know these factors influence students’ willingness to put forth effort, to take work seriously, to try. So, how do we relate these factors to the content standards and assessments that we are putting into place? How might we convey a sense of efficacy to help students believe that they can have some measure of success in the system in this era of high standards and expectations?
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**Content Standards and Meaningful Learning**

Content standards specify what students should know and be able to do in the various subject areas. They are intended to provide a focus for curriculum, assessment and instruction. But two common problems often emerge when districts and individual teachers attempt to use the standards. One problem has to do with the sheer number of content standards and benchmarks that have been enacted around the country. Dr. Robert Marzano and his colleague John Marzano at the Mid-Continent Regional Education Laboratory examined a hundred and sixty state and national content standards documents. After synthesizing the content and eliminating repetition from the various content standards, they narrowed the set down to a mere four thousand benchmarks. Bob observed that if educators were to take approximately thirty minutes of instructional time per benchmark, we would need essentially nine more years of school to teach all of them. Many curriculum committees and teachers have wrestled with this problem, especially at the elementary level where the same teacher teaches multiple subjects.

The second problem with content standards is something that Grant Wiggins and I have termed the “Goldilocks problem.” Just like in the fairy tale, some standards are too big, some are too small, and a few are just right. For example, consider the following example of a world geography standard for grade 10 standard that is just “too big”:

*Students will analyze regional development of Asia, Africa, Middle East, Latin America, and the Caribbean, in terms of physical, economic, and cultural characteristics, and historical evolution, 1000 AD to the present.*

What exactly are we supposed to teach? What specifically will we assess? A standard this broad is virtually useless without greater specificity.

Conversely, some standards are too small. For example, a testable concept for 3rd grade science in one state is “estivation” (a hibernation-type process that desert animals use to conserve energy in hot desert environments). According to this state's standards, estivation is important for 3rd graders to know. Now, I’m not going to question that. But I will question whether this level of specificity is desirable for state level standards. I happen to think it is too discreet.

**Figure 1. Establishing Curricular Priorities**

- **worth being familiar with**
- **important to know & do**
- **enduring understandings**
- **nice to know**
- **fundamental concepts & skills**
- **key ideas worth understanding in depth**

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So, how should we navigate between those content standards that are too global and those that are too discrete? For the last several years, Grant Wiggins and I have been trying to tackle some of the challenges posed by too many standards or by standards that are too big or too small. We have found that in many cases, there is a need to “unpack” the content standards to identify the “big ideas” contained within. For instance, we have developed a graphic organizer consisting of three ovals to help educators establish curriculum priorities based on the content. (Figure 1)

The outer ring represents knowledge worth being familiar with. I refer to this portion of the diagram as “the nice to know if you have time” content. This is
where we may teach interesting facts, tidbits, and story. But it's not at the heart of teaching.

The next ring addresses the question, “What is most important for students to know and be able to do?” The content identified for this oval reflects the basics, the core concepts, and the foundational skills. If students leave a unit or a course without knowing this or being able to do that, we would say they have missed something really important. Well-designed standards and benchmarks specify the important knowledge and skill for the center ring.

The inner oval (labeled “enduring understanding”) goes beyond particular facts and skills to distinguish the larger ideas that we want students to come to understand and be able to apply. This is where we want to “uncover the curriculum” and go into greater depth.

When using this visual, it is important to recognize that the three rings are not mutually exclusive. We need to teach facts, concepts, and skills, but under a larger conceptual umbrella of “big ideas” that will endure beyond the particulars of a lesson, unit or course. So, how does this idea of unpacking the content standards connect to meaningful learning for students? Let us consider two examples.

The first example can be seen in a social studies standard – “Students will examine documents such as the Magna Carta and the Declaration of Independence in order to analyze the origins of limited government.” What are the “big ideas” that we want students to come to understand when they examine these documents? Instead of fixing on dates, places, and names of the signers, we'll focus on the larger ideas of limited government and the role of written Constitutions in safeguarding citizens from abuses of power. An emphasis on such ideas makes it more likely that students will come to “enduring understandings” such as:

- Democratic governments have to balance the rights of the individuals with the common good.
- A written Constitution articulates the rights of individuals and specifies the limits of a government’s power.

These are the bigger ideas contained within the standard. Moreover, because such ideas are transferable, they can be explored in various contexts that may have greater meaning for students (e.g., how do we balance the rights of individuals with the common good in our community, our school, our family?)

A second example comes from English/language arts standards that focus on different genres of writing, such as satire. Many students tend to think that satire is merely making fun of people, but of course, it’s a bit more than that. So, what is it that we want learners to come to understand about satire? Here are two larger ideas:

- Authors don’t always say (literally) what they mean. There are indirect ways, such as satire or irony, of communicating ideas.
- Satire is a deliberate literary form that is set up to expose and publicly ridicule ideas or actions that one thinks foolish or improper.

When we unpack standards to focus on big ideas and enduring understandings, we’re looking for ideas that have lasting value beyond a particular unit of study. We are seeking larger, transferable ideas having value beyond the classroom.

We suggest two ways of conceptualizing enduring understandings. (See Figure 2.) First, we suggest that people frame them as full-sentence generalizations. Here’s a helpful analogy: Consider a unit or course as a “story”; then, ask, what’s the ‘moral of the story’? For instance, if your unit on statistics is a story, one of the morals is that, “statistical analysis and data display often reveal patterns in data, enabling us to make predictions based on the observed patterns.” Notice that more specific concepts in statistics (e.g., median, sampling, and standard deviation) are like important ‘characters’ in the story, but they are not the morals.

A second way of identifying and framing understandings within the curriculum is through essential questions. Here are a few examples: What makes a great book? Do the arts reflect society or shape it? How are form and function linked in nature? Is history the story told by the ‘winners’? How do effective writers hook and hold their readers? How do we know what we know?

Essential questions like these can be fruitfully examined and revisited. They provide a doorway for ‘uncovering’ the curriculum to explore big ideas. They ask us to think about content knowledge as the ‘answer’ to important questions, thus, offering a springboard for inquiry.

It is important to try to connect the standards and benchmarks through big ideas and essential questions to the interest and experiences of students so that they see a meaningful connection.
Take the following standard: students read world literature and examine the cultural context in which it was written to determine the similarities of the human condition. As stated, this standard is unlikely to “grab” most eighth graders. But how about the essential question a middle school teacher uses: How can stories from other places and times be about me? We use a question like this because we want kids to come to understand that, in fact, great literature explores universal patterns of human experience. Of course we’re going to teach organizational patterns, story structure, and writing skills. But we’re going to teach these specifics under a larger context, opened up by the essential question. As much as possible, we want to hook students’ interest and stimulate them to want to know more.

**Assessment and Meaningful Learning**

I am going to argue that if we really want to promote meaningful learning, we need to anchor our teaching around authentic performance tasks, supplemented by other types of assessments. This advice may seem “out of sync” with the current assessment picture in California with its emphasis on the SAT 9 and the API. But I want to take a step back from the use of external, standardized assessments for accountability purposes to consider the meaning of the term, assessment. A classic definition of the term asserts that, “assessment is a basis for making inferences about people (in our case, about students and their learning or about schools and their performance) based on various sources of evidence.” Assessment is a process of synthesizing information to help us better understand and describe student learning, school performance, district performance, etc.

There is an important principle contained in this definition; namely, if we want to make valid inferences, we need to base them on multiple sources of evidence, not a single source. I like to use a photographic analogy to reinforce this point. Any single assessment—be it a quiz, a test, an observation, an external standardized test—is like a snapshot. It offers a “moment-in-time” picture. But we need to be cautious about putting too much stock in a single photograph. We should be thinking of assessment like a photo album, containing multiple pictures. Just as a photo album provides a more complete and accurate portrayal of an individual than any single snapshot, more assessment information allows us to make more valid inferences. The SAT 9 provides only a snapshot, albeit an important, high stakes one. We need to attend to the SAT 9 while realizing that it gives only one picture of student learning and school performance. We need a fuller assessment photo album.

So, how do we make the case for more assessments when politicians and the public fixate on SAT 9 scores? Leaders in a suburban Chicago area district, St. Charles Community Schools, used the following strategy to encourage their school board to look at other data beyond the standardized test scores. They displayed a pie chart for which the wedges represented their approved district curriculum standards. Then they asked the question, “What information are we getting from state and national tests about how our kids are doing?” They colored in the grades that were being tested for the different subjects. They also colored in what was being tested. In language arts, for example, reading and writing were tested, but not listening and speaking. Not all grade levels were tested in mathematics and language arts, and of course, many subjects, like art, foreign language, and physical education and health are not part of the state assessment at all. In short order, Board members were viewing a pie chart on which only a small portion of everything taught in the district was tested on the state assessment. They did the same analysis for other standardized tests given in the district, including the SAT and ACT.

The point here is straightforward—no state or national standardized test can assess everything that we teach, everything that we say is important. It just can’t be done. That’s not a criticism—it’s just a reality of the limits of large-scale assessment. State assessments can give us good information on some things that we teach. Their results give us a part of the picture, but they do not assess everything that we value.

Following their analysis of what was (and was not) tested by the standardized measures, the group in Illinois then put forth a proposal to their Board, in which they advocated for an expanded collection of assessment data to provide a more complete picture of student achievement. (See Figure 3.)
FURTHER RESEARCH

1. As a team, do your own attribution theory research about how your students’ belief systems affect the effort they put forth to be successful in school. (See p. 1)

- Identify any beliefs or practices at the school-site or district level that would encourage students to believe that school success is a result of external factors beyond their control.
- Share research about successful school practices that encourage students to recognize that hard work, effort, awareness of expectations, and persistence are the qualities that promote success in school.

2. Create a study group at the school site and/or district level to study research about how multiple measures of assessment can inform instruction. The study group can make presentations to the teaching staff, to curriculum/instructional councils, and to Board members about ways in which local assessments can complete the picture of student learning and inform instructional practices.

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Contact your regional Professional Development Consortium listed above for availability of Restructuring Briefs from the Asilomar 1998 and 1999 conferences.
INQUIRY QUESTIONS

1. Jay McTighe underscores the critical nature of using standards as a focus for curriculum, assessment, and instruction. He recommends "unpacking" content standards to identify the "big ideas" contained within. How could professional development opportunities in your school/district support teachers as they "unpack" the standards?
   - How can you "unpack" the standards so that every student at every program level has access to the "big ideas"?
   - What will administrators and teacher leaders need to do in order to support project-embedded instructional strategies related to "big ideas"?

2. McTighe and Wiggins created a graphic organizer (in Figure 1) to help educators establish curriculum priorities based on content standards. How might "unpacking" the standards for purposes of familiarity, foundational knowledge, and enduring understandings change the types of local assessments you use to measure student learning?
   - What kinds of professional development activities do staff members require in order to measure student achievement for each of the curriculum priorities?
   - How will underachieving students be assured access to all three areas of curricular priorities?

3. What changes do you need to make in order to ensure more meaningful learning experiences for all students?
   - How can you prevent an imbalance of instruction geared mostly toward skill drill and practice tests?
   - What beliefs and/or assumptions about instructional practices are preventing you from ensuring a more intellectually engaging curriculum for all children at all program levels?

4. What are you doing to celebrate measurable progress toward standards on the part of all your students?
   - Are you highlighting moments of progress on the part of your underachieving students? If not, how can you begin to support their success?
   - Are your local assessments organized to the point that everyone—students, teachers, support staff members, and members of the larger school community—are publicly applauding achievement growth? If not, what refinements to your assessment system are called for?

5. Two crucial variables influencing a student's willingness to put forth effort include (1) the clarity of learning goals and tasks and (2) the extent to which the learning goals/tasks are seen as useful, relevant, and purposeful from the student's perspective.
   - How can you work together to ensure that all teachers set clear expectations (for both learning outcomes as well as for assessment criteria) with each daily lesson?
   - What pedagogical strategies can be employed on a daily basis to ensure that students are aware of what they are learning and how their learning will be measured?
Let us look at three examples of classroom assessment tasks as a way of further exploring the link between assessment and meaningful learning.

1. Mathematics – “area and perimeter”
   You have been hired by a day care agency to fence in an area to be used for a play area. You have been provided with 60 feet of fencing (in 4 ft. sections) and a 4 ft. gate. How can you put up the fence so the children will have the maximum amount of space in which to play? Submit your plan for the playground area to the center director. Include a diagram, your calculations, and an explanation of why this is the best design.

2. American Literature – Catcher in the Rye
   You are a member of Holden Caulfield’s case-review committee at the hospital from which Holden is telling his story. Your task is to write: 1) a diagnostic report for the hospital, and 2) a letter to Holden’s parents explaining what’s wrong with him. Base your analysis on Holden’s own words.

3. Social Studies – “state history and geography”
   The State Department of Tourism has asked your help in planning a five-day tour of California for a group of foreign visitors. Plan the tour to help the visitors understand the state’s history, geography and its key economic assets. You should prepare a written itinerary, including an explanation of why each site was included on the tour.

   These are examples of meaningful performance tasks that provide evidence of student understanding. Such tasks are typically interesting and engaging for students. To develop performance tasks of this type, we take the “big ideas” and core processes contained in content standards and frame them around an “authentic” context. We identify an audience (real or imaginary), a purpose or goal, and a predictable response is likely:
   1. They shut down. They come, but they don’t do the work.
   2. They act up as a distraction from their perceived incompetence.
   3. They drop out (when they are legally able).

   So, do we lower our standards to enable more students to meet them? That is not a satisfactory response since such an approach ultimately does a disservice to those students and their parents by misleading them into believing that they are more skilled than they are.

   How, then, do we maintain high standards and still accommodate the psychological need of feeling that you have the potential for success? I would argue that those of you who are collecting student work over time, in portfolio-type situations, are better able to chart progress and growth over time and to celebrate it. This, to me, is one of the ways that we keep lower achieving students in the game. We highlight and applaud progress toward the standard, as well as overall achievement.

   An example of such an approach occurs in the summer swim league in which my daughters participate. Swimmers not only earn first, second, third, and fourth place ribbons, but also “best-time” ribbons. At the awards banquet at the end of the year, they celebrate not only the high point winners for each of the age groups but also the best-time winners. Who are the best-time winners? Typically, the slower swimmers. The kids who come to practice every day, work hard, and consistently improve. These swimmers are very proud of getting these awards in front of the community. This is a system that celebrates progress and growth toward standards, as well as raw achievement in meeting the standards. I think that is terribly important and not something to lose sight of in this era of standards and accountability.
essential questions - "How do we hold ourselves accountable for students' learning?" and "What really counts as evidence of learning?" pointed to the need to collect additional assessment evidence.

They effectively made the case for developing and using local assessments, including performance assessments in key subjects and grade levels as well as portfolios in language arts and visual arts. Rather than denouncing the standardized tests as inadequate, they argued for supplementing the state assessment with additional data. The Board was impressed by the proposal and supported the expanded assessment plan.

The use of multiple types of assessment not only provides more data on student achievement, it can help to mitigate a disturbing trend -- the tendency to fixate on the state test and on "test preparation" as a way of increasing test scores. In states like California, where the state test is composed predominantly of selected-response items, there is a real danger of narrowing the curriculum and undermining good instruction in the quest for higher scores. The high stakes accorded to state test results increase pressures on teachers and administrators. A logical response is to focus the curriculum on what is tested and to emphasize instruction that replicates the test format. But taken to an extreme, such a response threatens to intellectually neuter the curriculum and emphasize "multiple-choice teaching" by focusing on the discrete knowledge and skills which are tested.

Grant Wiggins uses a satirical analogy to highlight this danger. He likens a standardized test to a physical exam -- a "quick and dirty" sampling of health indicators. Unlike an annual physical, most state or national standardized tests offer a brief "audit" of indicators of learning that correlate with larger constructs. He cautions us not to mistake the measure for the goal -- i.e., not to think about the test as the goal. Teaching for meaningful learning of the content standards is the goal. If we forget this larger goal, then we may fall into the folly of practice testing, akin to practicing for a physical exam! When presented this way, it sounds silly -- to do better on your physical exam, you practice holding your breath to raise or lower your blood pressure. How do we improve the indicators of health on a physical exam? We eat a balanced diet, exercise regularly, get sufficient sleep, etc., and the effects of a healthy lifestyle are revealed on the physical audit. How do we improve performance on a state audit of content standards? We teach to the content standards in rich, meaningful, and engaging ways -- the educational equivalent of a healthy lifestyle. Of course, we give students some practice with the test format, but we don't fixate on it. And we use other measures to provide a fuller picture.

**Making the link between assessment and meaningful learning**

If we think about assessment in terms of a collection of evidence (a photo album), rather than a test (a snapshot), it suggests the question, "what evidence would we accept that SAT 9, provide one measure, additional evidence is needed. This is where local assessment, collected at the district and classroom level, will help us round out the picture and avoid relying on a single measure.

Let's revisit the three ovals presented earlier in terms of the link to assessment evidence. (See Figure 4.) We need to match the type and format of assessments used to gather evidence to the curriculum priorities suggested by the content standards.

If I want to assess for "familiarity," (the outer oval) I am going to use the quickest, most efficient assessments (e.g., multiple choice, true/false, fill in the blanks) that are easy to give and easy to check. For the important facts, concepts and skills identified in the middle oval, I will employ a variety of assessment formats (e.g., selected-response and short answer items, observations, open-ended tasks, etc.) as sources of evidence. But how will I know that students really understand the big ideas (the "enduring understandings" in the inner oval) contained in the content standards? Researchers such as Howard Gardner, David Perkins and Grant Wiggins point out that if we want to check for understanding, we need to see if students can apply knowledge and skills appropriately to a new situation. Thus, my assessments for understanding will be anchored around performance tasks or projects that ask students to apply knowledge and skills within a novel context. Testing for knowledge of discrete facts and skills just won't do it. Just selecting the correct answer from a set of given alternatives does not ensure that students understand the why and how, that they can use what they have learned in a meaningful way.