

Assessment and Student Success in a Differentiated Classroom

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INTRODUCTION

It's generally accepted that one mission of schooling is to help learners develop competence and confidence with important knowledge, understanding, and skills designed to help them relate more meaningfully to the world they live in and prepare them to be good stewards of that world. Fundamental to that mission is ensuring that educators have a sound understanding of the roles of curriculum design, assessment, and instructional planning in student success. This paper highlights attributes of quality classroom practice within and among these three areas. It pays particular attention to critical intersections between formative assessment and instructional planning for teachers who seek to support the success of a broad range of learners in today's culturally and academically diverse classrooms.

WHERE DO ASSESSMENT AND INSTRUCTION FIT IN THE BIG PICTURE OF TEACHING AND LEARNING?

Quality teaching calls on teachers to understand and plan wisely for five key classroom elements: learning environment, curriculum, assessment, instruction, and classroom leadership/management. It also calls on teachers to understand the interdependence of those elements in supporting success for each student. Weakness in any of these elements diminishes the effectiveness of all of the others.

There is no doubt that a teacher's capacity to create a learning environment that is "invitational" (Hattie, 2009) for each student is a powerful contributor to student success. There is also no doubt that a teacher's capacity to enlist the partnership of students in creating and implementing classroom routines and processes that balance flexibility and predictability is essential. Such a balance is key if the class is to truly think about and understand content rather than merely



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repeat it; it also allows the class to make room for the individual learning differences apparent in most contemporary classrooms (Hattie, 2009; Tomlinson & Imbeau, 2010). It is difficult to overstate the influence—for better or worse—of these two elements on young people as learners and as human beings.

The focus of this paper, however, is on what we might think of as the curriculumassessment-instruction connection (CAI connection). The quality of these three elements, separately and collectively, is at the core of teaching's mission. Stated simply, the CAI connection asks teachers to reflect on and respond proactively to three questions:

- What do my students need to learn in order to be successful in a given segment of learning? (Where do they need to be?)
- Given what they should know, understand, and be able to do, what do my students know, understand, and do proficiently? (Where are they?)
- What can I do to maximize the growth of each learner in what they need to know, understand, and be able to do for success? (What am I going to do to move them forward?)



The first of the three questions relates to curriculum. The second relates to formative assessment. The third relates to instruction. Curricular goals inform formative assessment; formative assessment derives from curricular goals and informs instructional planning, which, in turn, stems from clear curricular goals. This is the CAI connection, and it characterizes the kind of purposeful thinking and planning that propels student learning forward.

Because all truly effective teaching requires consistent and careful attention to the five classroom elements (environment, curriculum, assessment, instruction, and classroom leadership/management) and how they interrelate, the ASCD model of differentiation includes all five. Most specifically, however, differentiation responds to the third of the three questions noted above: what can I do to move my students forward?

Since the three elements in the CAI connection are so tightly interdependent, phrasing the question as follows more accurately reflects their reciprocal nature: based on what I learn from formative assessment about where my students currently are in relation to our key goals, what teaching and learning plans will best help each of them move forward?

This is the logic—and common sense—of teaching. Without clear and powerful learning targets, our purpose is murky at best. In addition, in the absence of clear and specific learning goals that are evident to students, assessments become a guessing game, and students feel



threatened by the ambiguity. Further, ill-focused assessments fall short of providing teachers with actionable information. Instruction just moves ahead according to plan with little or no regard for learner development.

WHAT ARE THE ATTRIBUTES OF A CURRICULUM THAT SUPPORTS STUDENT SUCCESS?

Curriculum is the teacher's invitation to young people to embrace a life of learning and thought. That's a tall order—but we ask students to spend the better part of their first two decades of life trying to master that curriculum. What we ask them to learn should be worthy of that time and effort. It should affirm their capacity as learners and should commend learning as one of the most worthy of human pursuits.

Our best understanding of how people learn indicates that what we teach (curriculum) should have the attributes noted in Figure 1 (Erickson, 2007; National Research Council, 1999; Sousa & Tomlinson, 2011; Wiggins & McTighe, 2005).

Figure 1: Attributes of Quality Curriculum		
Attributes of Quality Curriculum	Brief Explanation	
Planned for student engagement	Designed to capture the minds of learn- ers, to evoke curiosity, and to build on their natural desire to learn	
High relevance to student	Clearly relates to students' own lives and experiences	
Focused on understanding	Stresses need for students to understand what they learn so they can use and trans- fer it rather than only trying to commit it to memory	
Emphasis on sense making	Stresses students as thinkers, problem solvers, and meaning makers rather than mere absorbers	
Connective and integrative	Helps students grasp how the disciplines work and how they help us make sense of the world; shows students links between the disciplines and between what they learn and their lives	
Developmentally appropriate	Makes sense for each student's stage of growth—neurologically, psychologically, and socially	
Clearly articulated learning goals	Both teacher and students are clear on what students should know, understand, and be able to do (KUDs) as a result of any segment of learning	



These characteristics are important primarily because they maximize student learning. In terms of assessment and instruction, they are important because curriculum "feeds forward" into those two arenas—or should do so. If we design our curriculum, for example, to be engaging, result in understanding, and help students make critical connections, then assessments and instruction should be designed to promote those same ends. The clearly articulated learning goals (KUDs) that a given curriculum is designed to help students learn must be the same ones that we assess and the same ones that instruction should be designed to teach. If we say we value student thinking and understanding but largely assess "right answers" and spend most of our class time doing rote drills on information and skills, the goal of developing students who are engaged thinkers is merely a delusion.

WHAT KINDS OF ASSESSMENTS HELP SUPPORT STUDENT SUCCESS?

There are three categories of teacher-created assessments that, if used correctly, are integral to supporting robust learning for the broad spectrum of learners in contemporary classrooms: pre-assessments, formative assessments, and summative assessments. Pre-assessments are a kind of formative assessment administered at or near the outset of a unit of study. It's helpful to consider pre-assessments separately because their goals and uses are slightly different from those of formative or ongoing assessments, which occur throughout a unit. Figure 2 explains the purpose and nature of the three categories; this paper focuses on pre- and formative assessments.

Figure 2: Categories of Assessments and Their Purposes	
Category of Assessment	Purpose and Nature of the Category
Pre-assessment	• Diagnostic assessments designed to determine student proximity to unit KUDs and to evaluate important pre-requisite knowledge for the unit
	 Administered before a unit begins (or shortly into the unit if the content is likely to be totally new to students)
	 Tightly aligned with unit KUDs
	 Samples key KUDs; not intended to be lengthy or exhaustive
	 Can use a variety of formats, includ- ing Frayer diagrams, writing prompts, graphic organizers, etc.
	 Meant to give the teacher a sense of the range of needs in the class rela- tive to KUDs as a unit begins
	 Not graded



Figure 2: Categories of Assessments and Their Purposes (continued)	
Category of Assessment	Purpose and Nature of the Category
Formative assessment	 Administered often throughout a unit Tightly aligned with KUDs, with particular emphasis on KUDs for most
	 Can use a variety of formats such as exit cards, journal entries, systematic teacher conversations with individual students, problems to solve, think- alouds, etc.
	• Meant to help the teacher understand how each student's development with the KUDs is progressing so the teacher can clearly plan next steps for the class as a whole and for small groups of students and individuals
	• Rarely graded, but can provide clear, important feedback that helps a stu- dent determine next steps in learning
Summative assessment	 Used at end of key segments of a unit and at the end of a unit
	 Tightly aligned with KUDs for the whole unit or a recently completed key segment
	• Meant to determine the level of mas- tery each student has achieved with the KUDs at the end of a unit or at key junctures in the unit
	• Can use closed formats (good for measuring student proficiency in pro- viding right answers) or performance formats (good for measuring student proficiency in using knowledge, understanding, and skill to address issues or solve problems)
	• Typically graded; should also include clear, actionable feedback to help students understand how to continue learning



It's useful to note that pre- and formative assessments can be formal (direct) or informal (indirect). Formal assessments are structured situations in which instructional time focuses solely on gathering information at the individual student level across an entire class. Examples include paper-and-pencil questions, structured observations or interviews, journal entries, problem sets, and so on. Informal or unstructured assessments provide sweeps or samples of student learning status. Examples include class-developed KWL charts, windshield checks, thumbs up/thumbs down checks, and so on. Informal formative assessments are useful for providing a sense of how the class as a whole is faring at a given point in instruction. They are less helpful for understanding the status of individual students. Taken together, however, a combination of formal and informal preand formative assessments is a powerful tool to help teachers teach for learning rather than teaching for coverage.

In addition to using pre- and formative assessments to reveal the evolution of student readiness along a continuum of learning related to KUDs, it is also important to use these types of assessment to determine student interest and learning profiles. Addressing student readiness is critical to academic progress. When work is consistently too difficult or too easy for a student, that student does not develop greater knowledge, understanding, and skill (Sousa & Tomlinson, 2011; Tomlinson, 2014). Effective use of formative assessment is key for teachers to understand student readiness throughout the academic year. Addressing student interests is important for motivation. It enhances a student's autonomy while linking important content with ideas, events, and pursuits that are engaging and relevant to a learner. To determine student interests, teachers can use surveys and open-ended responses and observe students carefully

throughout the year. Many students develop new interests during the school year, so it's important for teachers to update their awareness of student interests throughout the year to address this natural change.

In addition to assessing and addressing student readiness and interest, it is also useful to plan for students' varied approaches to learning. Learning progresses more efficiently when students can work in ways that are a good fit for them personally—ways that feel



natural. Many experts in the fields of neuroscience, psychology, and sociology caution against using instruments that lack reliability and validity to assess student learning profiles and caution against labeling a student as a certain kind of learner. We all learn in a variety of ways depending on a variety of factors. Labels tend to indicate otherwise and can easily lead to stereotyping (Sousa & Tomlinson, 2011; Tomlinson, 2014). Here, too, teacher-generated questions that guide students in reflecting on approaches to learning that seem to work for them can be helpful, as can careful teacher observation of students at work over time.

All three forms of assessment—pre-assessments, formative assessments, and summative assessments-should be used in service of student learning. Some experts on assessment and measurement (e.g., Earl, 2003; Wiliam, 2011) distinguish between assessment of learning, assessment for learning, and assessment as learning. Summative assessment is generally described as assessment of learning. It asks how well the student has achieved mastery of KUDs—and then the class moves on. Pre-assessments and formative assessments are often described as assessments for learning-that is, they help the teacher plan for better focused or more targeted instruction than would likely occur without the information about student learning the assessments reveal. Formative assessments are also opportunities to use assessment as learning, particularly when students are active participants in analyzing assessment results in order to create a basis for planning and supporting their own academic growth. When assessment becomes a regular part of the learning process, students become increasingly skilled at focusing on key learning targets, reflecting on their own work in regard

to those targets, setting goals and timelines for their learning, and providing meaningful feedback to one another. The result is likely to be students who develop or reinforce a growth mindset because they have increasing agency over learning and see evidence that working smart and hard leads to success. Most students need support from adults in developing these skills. Teachers serve their students well when they include skills supporting independence as part of what students should be able to do as a result of their studies. In this way, assessment not only measures but also teaches (Wiggins & McTighe, 1998). Because students vary widely in how they apply skills of independence, it's important for teachers to differentiate such skills based on student proficiency, just as they differentiate instruction in other skills.



HOW CAN TEACHERS MAKE SENSE OF FORMATIVE ASSESSMENTS?

Many teachers feel quite at home with graded assessments, but pre- and formative assessments should generally not be graded, and teachers may feel uncertain about what to do with assessments other than grading them. Rather than focusing on grades, teachers can productively focus on finding patterns in formative assessment results, providing students with useful feedback on these assessments, and involving students in reflecting on their formative work and planning for their own growth as a result.

When finding patterns, teachers look for and identify "clusters" of responses in order to plan next steps in instruction. For example, a teacher may find it useful to see who is secure, developing, or in need of "rebooting" in terms of knowledge, understanding, and skills on a particular assessment. At another point, the teacher may want to focus on students who can generally provide accurate information about a topic but cannot explain their thinking, as opposed to students who can do both. In another instance, a teacher may be looking for students who can transfer understanding or skills to unfamiliar situations, in contrast to those who cannot. Pattern finding is greatly dependent on having clear KUDs for units and lessons and on a teacher's ability to "read beyond" a particular answer to interpret what the answer suggests about a student's current point of readiness. Once a teacher determines the pattern(s) of student responses and concludes that there are two clusters of students —or three, or four—instructional planning will focus on how to best aid students in those clusters in moving ahead with important knowledge, understanding, or skills. We'll look at planning instruction for a range of needs based on assessment findings in the next section.

Providing feedback to students is another key feature of effective use of formative assessment. Quality feedback is

- Aligned with learning targets (KUDs).
- Specific to the current task.
- Frequent.
- Positive.
- Tailored to a particular student.
- Actionable (enables the student to know what to do to continue to grow).

Finally, ensuring that students examine their own progress through analysis of formative assessments is an important step in effectively using formative assessment. The degree to which an assessment can aid both teachers and students in thinking and planning more strategically predicts its power to affect learning in a positive way. Many students will, at least initially, need support as they learn how to think and plan based on formative assessment results. Most will also need help to learn how to provide meaningful feedback to peers.



HOW DO TEACHERS PLAN INSTRUCTION BASED ON ASSESSMENT INFORMATION?

The purpose of pre- and formative assessment is to improve learning outcomes for students. If teachers administer these assessments but do little or nothing to modify their teaching/learning plans, the assessments were a waste of valuable time. In fact, an assessment does not qualify as pre- or formative unless teachers use evidence from the assessment to adapt their teaching to meet student needs (Black & Wiliam, 2009).

Once teachers have examined student assessment results and determined achievement patterns that suggest varied needs for instructional supports, they then need to think broadly about an upcoming instructional sequence in terms of whole class, small group, and individual needs. Some lessons or learning experiences are likely necessary for the class as a whole and should be planned accordingly.

At other points, it may be more useful to plan learning experiences that either scaffold or extend learning around particular knowledge, understanding, or skills for small groups of students who need extra support or extra challenges to progress. During times when the class breaks into small groups for more focused work, it may be helpful for teachers to work with some students in a more individualized way for a variety of reasons, including a student's need for very advanced challenge, issues related to learning language, reading difficulties, extended absences, particular student interests, and so on.

After mapping a sequence of whole class, small group, and individual learning experiences, teachers can more effectively differentiate tasks within all of those contexts to target students' varied needs. Even within whole class sessions, differentiation is important. For example, teachers may elect to use images rather than only words to introduce an unfamiliar or abstract concept. They might build in think-pair-share opportunities to give students a chance to formulate and share their thinking rather than assuming everyone will "get the point" solely by listening. It might be helpful to use a graphic organizer structured to follow the key points of a lecture so that students who have difficulty with note taking can more ably capture necessary content from the lecture. It can be helpful to a range of students if teachers use illustrations that link key ideas or skills with a



variety of student interest areas or cultures. It is certainly helpful for teachers to ask questions of escalating degrees of complexity during class discussions so that all students encounter questions at their current levels of understanding while also hearing other students elaborate on or extend the ideas. Differentiation during whole class segments is, in some ways, as powerful as differentiation during "breakout" segments of learning, allowing the full spectrum of learners in a class to benefit from learning experiences that target the class as a whole. Both whole-class and breakout lessons should, of course, be well-aligned with lesson and unit KUDs, or with prerequisite knowledge, understanding, and skill in which a student has significant gaps that must be closed for learning to progress. Even in lessons designed around student interests rather than readiness, the goal should be to enable students to work with learning targets within contexts of particular relevance, personal passion, or general interest.

When teachers plan differentiated lessons for breakout groups, sometimes the goal will simply be to have students practice key vocabulary or critical skills at their various points of development with that knowledge or skill. Instructional planning in such instances follows the particular knowledge and skills needs of individual students or clusters of students.

At other points, teachers should engage students with experiences that help them use key knowledge and skills to make sense of or apply important understandings or big ideas. In these instances, a powerful approach to instructional planning is "teaching up." Here, teachers create a task that would be challenging for advanced learners and then plan alternate versions of the task by either scaffolding or extending the initial task to ensure that all students have access to a high-expectations learning opportunity at a level of challenge that stretches them just a bit beyond their comfort zones. This combination of high expectations and high support has much greater potential to enhance learning for a very broad range of students than does the approach of creating an "average" task and trying to dilute it or "pump it up." Figure 3 notes some strategies for scaffolding and extending student work. All versions of a task should be "respectful," meaning that they should (a) be equally interesting and engaging to students, (b) cast students as thinkers and problem solvers, and (c) cast students as thinkers who meaningfully use essential knowledge, understanding, and skills.

Teachers who carefully and purposefully study their own students find that each opportunity to watch and converse with students as they work provides another round of formative assessment information that can further guide their teaching and instructional planning. In this way, teachers learn as much from their students' work as do the students themselves. Both teachers and students should become progressively more able to support increasing academic success.



Some Strategies for Scaffolding Student	Some Strategies for Extending
Work	Student Work
 Providing text and directions at appropriate reading level Providing texts and directions in student's first language Streamlining directions Encouraging students to create early drafts of writing in their first language Front-loading academic vocabulary Using small-group instruction or discussion as a tool to prime students for upcoming work or to assist with meaning making Providing text digests or summaries to support comprehension Using peer pairs or well-structured tutorials to assist students in learning Providing practice with critical skills—including prerequisite skills—that are necessary for quality work Using graphic organizers or templates to guide student thinking and/or writing Designing tasks that are more concrete, have fewer components, or are more structured Providing quality models at the student's level of mastery Assigning homework targeted at student's level of mastery with key knowledge and skills 	 Using advanced resources Using small group instruction to push student thinking Introducing complex vocabulary Designing tasks that require considerable independence and are complex, abstract, multifaceted, and open ended Designing tasks that require depth and breadth of knowledge Designing tasks that require making connections across times, places, and content areas Providing clear feedback that focuses students on depth, breadth, insight, and quality Providing advanced criteria for success Providing models at high levels of excellence Calling on students to use multiple concepts, multiple skills, or unknown skills Encouraging students to move rapidly from information to meaning making Probing for multiple meanings Examining issues and problems from multiple and disparate perspectives Putting extended emphasis on student choices related to content, process, and product—other than those necessary for initial rigor



Figure 3: Strategies for Scaffolding and Extending Student Work (continued)		
Some Strategies for Scaffolding Student Work	Some Strategies for Extending Student Work	
 Assigning multipart tasks one part at a time Providing guidance and illustrations to help students move from infor- mation to meaning making Providing very clear feedback on students' next steps and supporting students in planning and working based on the feedback Helping students learn to provide clear and useful feedback to one another Using multiple modes of teacher input Providing multiple ways of express- ing learning Creating tasks based on student interest Providing opportunities to learn in 	 Supporting students in working like a professional as much as possible Supporting students in using tech- nologies in new ways to present information or solve problems Developing long-term, indepen- dent tasks with appropriate support Assigning homework at advanced challenge levels Providing for multiple ways of expressing learning Creating tasks based on student interest Providing opportunities to learn in preferred modes Encouraging comfort with ambiguity 	
preferred modes		

SUMMARY





FREQUENTLY ASKED QUESTIONS

1. Is it acceptable, or even wise, to differentiate assessments?

An assessment should be developed with the intent of enabling students to fully show what they know, understand, and can do. Let's say a student understands a concept in science but can't demonstrate that understanding by writing an explanatory paragraph because the student is new to English or has a learning disability that impedes writing. If that student can demonstrate understanding of the concept by drawing a diagram and labeling it, the teacher will have a much clearer understanding of the student's status with the content than if the student only had the option of writing the paragraph. Our belief is that it is often wise to differentiate instruction so that students have the greatest possible opportunity to show what they know. The one caveat here—and it's an important one—is that while the format or working conditions for the assessment may (and perhaps should) be differentiated, the learning goals for the assessment should not be differentiated. An exception to this precept of not varying the goals of the assessment might occur with a student who has an Individualized Education Program (IEP) that indicates different learning goals.

2. Should a teacher assign students to differentiated assignments or should the student make the choice of which task or version of a task to complete?

The answer to that question depends on a number of factors, such as the age and maturity of the students and the nature of the task. It's useful to bear in mind a couple of ideas when making a decision related to teacher choice vs. student choice. One goal of education ought always to be enhancing students' ability to make wise choices that benefit their growth, learning, and academic success. If teachers continually make choices for students rather than guiding them in making judicious choices, then students leave school without an essential life skill. Therefore, depending on the nature of the assignment and the particular students, teachers should strike a balance between their role as diagnostician and prescriber and the students' role in taking charge of their learning. In general, it makes sense for students to have the primary voice in designing and selecting both interest-based and learning profile–based assignments. It may make sense in a greater number of instances for teachers to assign readiness-based tasks and then work with students to progressively make wiser decisions without teacher direction.



3. Why is it considered a bad idea to grade pre- and formative assessments?

People need practice to master complex ideas and skills. Pre- and formative assessments are part of the practice-to-learn cycle. When we grade during the practice phase of learning, we (unintentionally) teach students that making errors is costly. We increase a sense of inevitable doom for students who consistently struggle in school and a sense of panic for highly grade-conscious students. During practice, it makes much more sense to help students learn that consistent hard work and reflection will benefit them when they are summatively assessed—and in life. That's part of helping students develop a growth mindset and efficacy as learners.

4. If I don't grade homework, my students won't do it. How do I handle that?

That's a hard question because the answer is hard. Students don't enter school with a jaded attitude about homework. They've learned it over the years—and they can unlearn it. It may well be that homework seems more punitive than beneficial to a lot of students. If homework seems more purposeful and less burdensome, is a better fit for a student's particular point of learning, allows for more student voice, is more engaging, and results in greater academic success, it's a safe bet that the "if you don't grade it, I won't do it" attitude will shift. You might want to record who completes homework and who doesn't (see Question 5); there are strategies for checking homework (including differentiated homework) in class that make it appealing for a student to complete the work. In the end, though, if homework seems like a neverending burden to young learners, then grades will likely remain a necessary bribe for doing the work. Designing more purposeful, engaging homework and establishing a clear reason for doing it that is differentiated to address students' varied readiness levels and interests would be a great start to changing this attitude.

5. How do you grade in a differentiated classroom?

That's a complex question that has been answered in greater length elsewhere (see Sousa & Tomlinson, 2011; Tomlinson & McTighe, 2006; Tomlinson & Moon, 2013). The short answer is that, except in cases where there are no common learning targets for a class and students are, in essence, working independently, the learning targets are the anchor for assessing and reporting student status. For that reason, it's very important that summative assessments (just like curriculum and formative assessments) are clearly and consistently aligned with those goals (KUDs) and that students and parents receive clear reports on how students are faring with those goals. Therefore, when work is graded, the grade needs to be as accurate and unambiguous as possible, providing a status report related to the KUDs for each student. Such grades should be criteria based (the criteria being the KUDs), not competition based. When it's time for report cards, the general wisdom holds that we should



report three separate grades (not averaged or combined) to parents and students. One of the grades is a performance or product grade: where does the student stand with the KUDs? The second is a process grade, or reflection of habits of mind and work: how diligently and wisely has the student worked during a given marking period? (Homework might be a component of this grade, but not of the performance grade.) The third grade reflects progress or growth: given where the student started this marking period with the goals/KUDs, how much has he grown? Performance, process (habits of mind and work), and progress are all observable. Reporting the three grades separately provides a much more telling profile of a student than does a single grade that lumps everything together. The three grades also make clear a growth mindset message: If you work hard and smart, you will grow. If you continue to work hard and smart, you will continue to grow. If you continue to grow, there is every reason to believe that you can achieve or surpass the designated learning targets. Not all report cards currently support performance-process-progress grading, of course. Nonetheless, there are many ways to use the approach and communicate it to parents and students, including addenda to report cards, comments on report cards, parent conferences, student-led parent conferences, and student- or teacherwritten reports to parents. The message of this kind of grading is much more encouraging of growth than many of our more traditional approaches, clarifies a student's performance status, and communicates a much more productive message about the role of hard work in success. Over time, report cards can and will change to support clearer and more promising ways of reviewing and reporting on student work.



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