# Student Work to D-I-E for:

## 6 Ways that Work from Strategically-Designed Performance Tasks Can Improve Assessment Quality, Deepen Learning, and Build Content and Pedagogical Expertise

(This is an excerpt from an upcoming in-depth article on student work analysis practices.)

Over the past decades, a variety of tools and protocols have been designed to analyze the work products of students. Most educators seem to agree that when teachers collaboratively analyze student work – whether it be in formal PLC groups or informal team meetings - they build a common understanding of what "good enough" looks like and are better able to determine what students might need in order to progress with their learning. A common use of student work analysis (SWA) has typically been to inform next steps for instruction by uncovering what students know and can do. A second use has been as an effective strategy for embedded professional development around what quality work looks like, especially when using rubrics to determine how to score work at different performance levels. In this article, I'd like to expand upon the two generally accepted purposes of SWA – to inform instruction and to develop reliability in scoring.

The focus of my work with schools and states has been primarily on cognitive rigor/deeper thinking and assessment design. While the assessment purposes and scope have differed, each of these projects has included a SWA component. Sometimes SWA was used to inform the task design and refinement stages; at other times, SWA was used to identify anchor papers that illustrate benchmarks of student progress across a school year or to use for student self- and peer-assessment in the classroom. For all of these projects, SWA was used to analyze the quality of the task itself in eliciting deeper understanding.

Over time, this work has validated two things for me:

- the quality of the assessment task is critical to what (evidence) it will uncover for the test developer, the teacher, or the student; and
- the SWA process must be both manageable and useful for educators or it will not be come embedded in everyday practice.

At the end of the day, if you are going to take the time to analyze and use what you find in student work, then you should take the time to strategically design or choose designed tasks that will not only assess recall and application of basic skills of concepts, but also uncover thinking, reasoning, and possible misconceptions when skills are transferred to novel or unfamiliar situations.

## What are strategically-designed performance tasks?

Strategically-designed performance tasks can include a variety of forms and formats, such as short lesson-based formative probes that produce oral or written responses (e.g., Keely, 2008), single or multi-day performance tasks that measure student competencies across grade levels and content areas (e.g., Center for Collaborative Education, 2012), or project-based tasks aimed to produce real-world, student-initiated products (Hess & Gong, 2014). **To my thinking, strategically-designed performance tasks are multi-step tasks requiring integration of basic skills and concepts with more complex skills, such as problem solving, abstract thinking, reasoning, and justification using evidence.**

In order to complete these non-routine tasks, students must make decisions along the way as they work to find and justify a solution or develop a final product. Designers of these tasks strategize how the task prompts might increase with complexity over the school year or across a unit of study. In other words, a benchmark opinion-writing task given in November will be less complex than an opinion-writing assessment given later in the school year. Both tasks assess the same core writing skills (organization, use of elaboration, grammar and word usage); but a benchmark writing task administered in the spring will demand greater levels of sophistication or depth of thinking in the student response.

One example of how tasks can be strategically designed to increase in complexity can be illustrated in a pair of pre-post tasks piloted in NYC schools at grade 3 for a unit on opinion writing. The earlier prompt – used as a pre-assessment for the unit – asked students to write about a favorite or not-so-favorite holiday and provide (personal) reasons to support their opinions. This task was designed to find out if students knew how to state and support an opinion, maintaining that focus throughout the piece. An analysis of the student work revealed that most students at the start of the unit could not differentiate writing an opinion from writing an informational summary about holidays. The results of the SWA from the pre-assessment led teachers to design lessons that built schema about opinion writing (what are key parts of an opinion piece and how do they differ from parts of a summary), as well as how to locate relevant text evidence to support opinions. The post assessment for the unit was more complex than the pre-assessment. This task asked students to read about a shark scientist, examine facts about two different kinds of sharks, and then state and support an opinion about which shark they would want to study. (The post writing task, with annotated student work, can be downloaded at http://schools.nyc.gov/NR/rdonlyres/0F4660F6-6E81-47F2-B0AC-42D85901CA85/0/NYCDOEG3LiteracySharks_Final.pdf .)

Both the pre- and post-tasks assess the same core writing skills; the post-assessment also included the integration of more complex skills, such as using text-based evidence as support for a stated opinion. The "proficient" student work from the pre-assessment will be much less complex than the proficient work from the post assessment; however, both tasks are appropriately designed to uncover what students are able to do and what students are ready to

learn next, at each given time (Karin's interactive student work analysis tool**,** Tool 11 Student Work Analysis, can be found at http://www.karin-hess.com/#!formative-and-performance-assessments/c1tze ).

These types of performance tasks, designed for thinking and doing, will always yield many different levels of information, because they 'uncover' student thinking, reveal any lack of clarity or accessibility in the task prompts, and provide for a range of possible responses.

**Six distinctly different purposes of student work analysis**

Each purpose requires a different lens when analyzing the student work and acting on what was first *Described, Interpreted* and then *Evaluated* before taking next steps. I call this evidence from student work "Student work to D-I-E for" and use the acronym DIE in this way:

- **D**escribe first only what you actually see (or hear students tell you about) in the work;
- **I**nterpret what that evidence might mean (specific to your intended purpose); and then
- **E**valuate next steps to be taken. Will you revise the prompt or rubric for better clarity? Will you add scaffolding to make the task more accessible to all students? Will you target specific lessons to address a common misconception? Will you be able to use the results from multiple tasks to show progress over time? And if not, should you design other assessment tasks to be given after more instruction and before the post assessment is given?

Below is a brief summary describing my six purposes and uses of SWA with some thinking to guide D-I-E questions that can frame individual teacher or group analyses of student work.

**Six Purposes and Uses of Student Work Analysis**

**Purpose 1: Review quality and effectiveness of tasks/prompts and scoring rubrics**

First and foremost, is establishing the quality of the assessment task, whether it be a formative probe, performance task, or extended project. Piloting tasks and refining them based on SWA leads to clarifying prompts, making tasks accessible and engaging for all students, modifying wording in scoring rubrics, and ensuring that questions posed will result in evidence of deeper thinking. Some of the evidence from SWA at this stage in the task development process has resulted in reducing the overall number of items, so that students have time to generate thoughtful responses; or clarifying or eliminating unnecessary vocabulary in prompts. Tasks that have not worked as effectively as intended are revised and re-piloted with another group of students.

- **Did the task elicit what we expected or wanted to see?**
- **Did we see a range of possible responses for this task – such as a range of depth of thinking and range of content knowledge (e.g., concrete to more abstract thinking)?**
- **Were there any surprises in what students did or showed in their work?**

**Purpose 2: Make key instructional decisions; target support and/or differentiate instruction**

From piloting a math problem solving task in several Kindergarten classrooms, teachers learned several things that informed their next steps for instruction. First of all, they learned that the phrase "show and tell how you know" in the task had never been modeled by teachers before. Many students had no idea what that phrase meant, but picked up on it when teachers began to use/model it daily in math think alouds. Scribing responses of younger students made it clear that what you see written on the page is not the limit of what students know and can do. As a matter of fact, teachers were quite surprised that students knew as much as they did when they ask them to tell how they knew they had the correct answer. SWA of strategically designed tasks often changes perceptions of the most skeptical teachers as to what depth of thinking is possible early in the year.

- **What can students do right now?**
- **Where did students seem to get "stuck"?**
- **How do I describe what each sub-grouping of students can do or not do now?**

**Purpose 3: Monitor student progress over time**

Traditional uses of pre-post testing - which was only useful when assessing for unidimensional skills, such as learning math facts or spelling words - must give way to a new approach when complex performance tasks are used. In the model I've found most effective (Hess, 2012), the pre-assessment focuses on the core learning or prerequisite skills that students will need to build upon, not the most complex applications that will be expected at the end of the unit. Using my SWA tool, teachers administer a pre-assessment and "sort" student work based evidence in the work. This first step in the SWA process of sorting (not scoring) the work makes it clear where individual students and the entire class are on a pre-, mid-, or post-assessment. Teachers often discover that the sorting of student papers from a pre-assessment, then a mid-assessment, and later a post assessment helps them to identify what students did or did not understand and document individual and class progress with each new benchmark assessment.

- **How do these results compare with what students did in the pre- or mid-assessment?**
- **Who is making progress?**
- **How well have my instructional supports, differentiation strategies, or targeted groupings worked?**

**Purpose 4: Engage students in meaningful peer- and self- assessment**

Active involvement in formative assessment means that students use assessment evidence to set and monitor progress towards learning goals, reflect on themselves as learners, and evaluate the quality of their performance. Valuing both one's struggles and successes accomplishing smaller learning targets over time has been proven to have a profound influence on deepening motivation, developing independence as a learner, and building what we have come to know as "a growth mindset" (Hess, 2015). One easy self- or peer-SWA strategy is what I call "Student Side-by-Side SWA." Students are given two pieces of student work (side-by-side) and asked to collaboratively discuss any of the following:

- **What does each student know and understand well, and where might each student improve?**
- **If sample work is from the same student (e.g., pre and post): What does the student know now that s/he did not know how to do as well in the first task? Can you locate some areas of improvement (evidence) from sample 1 to sample 2?**
- **If work samples show an obvious lower and higher example: Which work comes closest to the expectations for the task? Locate evidence in the work to support your reasoning.**

**Purpose 5: Better understand how learning progresses over time**

An alternative to score or data analysis is using SWA to uncover how learning evolves over time. Comparing how various student groups have performed on a performance task helps teachers to better understand how novice performers differ from expert performers. A teacher uses SWA to describe typical evidence for each group of students (in step 2 of the SWA process), giving her a sense of how to move each grouping of students forward (in step 3). Teachers also use evidence in student work to build descriptors in a learning trajectory. This is very different from simply "unpacking standards" because there are many skills/ concepts and common /misconceptions in student evidence that are not explicitly addressed in most standards. Learning trajectories include the interim stages of learning and some of the common stumbling blocks along the learning pathway.

- **What does Novice work look like?**
- **What does Expert work look like?**
- **Are there stages of learning that I did not anticipate?**

Moss & Brookhart (2012) explain learning trajectories in this way, "Consider where the (next) lesson resides in the larger learning trajectory… The right learning target for today's lesson builds upon the learning targets from previous lessons in the unit and connects to learning targets in future lessons to advance student understanding of important skills and concepts" (p.2).

## Purpose 6: Build content and pedagogical expertise

Teachers give assignments and grade them daily; but it is analyzing evidence in student work that causes teachers to reflect on *how* students learn and how to make their instructional and assessment practices more effective. Working collaboratively, teachers can establish common understandings of what "good enough" looks like and how to measure progress over time that involves more than counting score points going up or down. Teachers who use SWA to design and refine **assessments of thinking and doing** learn more about student understanding than about memorizing. By the same token, students who engage with rich, strategically-designed tasks on a regular basis learn that finding the answer is not as personally meaningful as knowing how to apply knowledge in new situations and explain the reasoning that supports their thinking.

- **Does this task elicit deeper understanding?**
- **What does deeper understanding actually look like?**

**Resources cited**

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