How Can Educators Design Authentic Performance Tasks?

In this blog, we will explore ideas and processes for designing authentic performance tasks to be used as rich learning activities and/or for purposes of assessment. In the spirit of "backward design," let's begin at the end by considering the qualities of a rich performance task, summarized in Figure 1. Since the criteria listed here define the features that we should see in an authentic task, they serve as targets for constructing tasks as well as the basis for reviewing draft tasks.

Figure 1 — Performance Task Review Criteria

Performance Task Review Criteria
Key: **3 = extensively**; **2 = to some degree; 1 = not yet**

The task addresses/assesses targeted standard(s)/ outcome(s).
1 2 3

The task calls for understanding and transfer, not simply recall or a formulaic response.
1 2 3

The task requires extended thinking — not just an answer.
1 2 3

The task establishes a meaningful, real-world (i.e., "authentic") context for application of knowledge and skills; i.e., includes a realistic purpose, a target audience, and genuine constraints.
1 2 3

The task includes criteria/rubric(s) targeting distinct traits of understanding

and successful performance; i.e., criteria do not simply focus on surface features of a product or performance.
1 2 3

The task directions for students are clear.
1 2 3

The task allows students to demonstrate their understanding/ proficiency with some appropriate choice/variety (e.g., of products or performances).
1 2 3

The task effectively integrates two or more subject areas.
1 2 3

The task incorporates appropriate use of technology.
1 2 3

Source: McTighe and Wiggins (2004)

Let's examine these task characteristics as they apply to designing authentic performance tasks:

The task addresses/assesses targeted standard(s)/ outcome(s).

As noted in previous blogs in this series, performance tasks ask students to perform with their knowledge. Accordingly, they are well suited to those educational goals that call for application of learning, including the Common Core State Standards (CCSS) in English/Language Arts Anchor Standards for listening, speaking, reading and writing; the CCSS Standards of Mathematical Practice; the Next Generation Science Standards eight Practices; the four dimensions of informed inquiry in The College, Career, and Civic Life (C3) Framework for Social Studies; and many of the National Coalition of Core Arts Standards (NCCAS). Also, performance tasks are naturally aligned with trans-disciplinary outcomes, such as the 21st Century Skills of Critical Thinking, Cooperation, Communication and Creativity (4Cs).

Here is a quick check to see if a performance task is well aligned to targeted standard(s)/ outcome(s): Show your task to another teacher or a team and ask them to tell you which standards/outcomes are being addressed. If they can determine all of your targeted standards/outcomes, then the alignment is sound. If they can infer one, but not all, of your targeted standards/outcomes, then you will likely need to modify the task (or eliminate one or more of the outcomes since they are not being addressed.)

The task calls for understanding and transfer, not simply recall or a formulaic response.

Students show evidence of their understanding when they can effectively do two things:

1. apply their learning to new or unfamiliar contexts; i.e., they can transfer their learning;
2. explain their process as well as their answer(s).

Therefore, when designing a performance task, educators should make sure that it requires application, not simply information. The task must also call for learners to present the why not just the what; to explain a concept in their own words; use new examples to illustrate a theory; and/or defend their position against critique.

A wise teacher I met once offered a wise aphorism: With performance tasks, "the juice must be worth the squeeze." In other words, the time and energy needed to design, implement and score a performance task must be worth the effort because it will promote meaningful learning and show that learners can use their learning in authentic and meaningful ways.

The task requires extended thinking — not just an answer.

Authentic performance tasks engage students in the thoughtful application of knowledge and skills. In order to insure that our tasks involve "higher order" thinking, I suggest using the Depth of Knowledge (DOK) framework developed by Dr. Norman Webb as a reference. DOK describes four levels of rigor or

cognitive demand in assessment tasks and learning assignments. Figure 2 presents a brief summary of the four levels of the DOK Framework with associated performance verbs. My general recommendation is that authentic performance tasks should target DOK Level 3. Longer-term projects for older students (such as those featured in Project-based Learning) would exhibit the characteristics of Level 4, while performance tasks could be appropriately challenging for children in the primary grades.

Figure 2 — The Depth of Knowledge (DOK) Framework

Tasks at Level 1
Performance Verbs associated with Level 1

- Require students to recite or recall information including facts, formulae, or simple procedures.
- Require students to demonstrate a rote response, use a well-known formula, follow a set procedure (like a recipe), or perform a clearly defined series of steps.
- Typically expect a "correct" answer.
- Arrange
- Calculate
- Cite
- Define
- Describe
- Draw
- Explain
- Give examples
- Identify
- Illustrate
- Label
- Locate
- List
- Match
- Measure
- Name
- Perform
- Quote
- Recall
- Recite
- Recognize
- Record
- Repeat
- Report
- Select
- State
- Summarize (factual info.)
- Tabulate

Tasks at Level 2
Performance Verbs associated with Level 2

- Focus on application of basic skills and concepts.
- Involve some reasoning beyond recall.
- Require students to perform two or more steps and make some decisions on how to approach the task or problem.
- Apply
- Calculate
- Categorize
- Classify
- Compare
- Compute
- Construct
- Convert
- Describe
- Determine Distinguish
- Estimate
- Explain
- Extend
- Extrapolate
- Find
- Formulate
- Generalize
- Graph
- Identify patterns
- Infer
- Interpolate
- Interpret
- Modify
- Observe
- Organize
- Predict
- Relate
- Represent
- Show
- Simplify
- Solve
- Sort
- Summarize (conceptual ideas)
- Use

Tasks at Level 3
Performance Verbs associated with Level 3

- Require strategic thinking and reasoning applied to situations that generally do not have a single "right" answer.
- Require students to go beyond the information given

to generalize, connect ideas, evaluate, and problem solve.
- Often have more than one possible answer.
- Expect students to support their answers, interpretations and conclusions by explaining their reasoning and citing relevant evidence.
- Appraise
- Assess
- Cite evidence
- Check
- Compare
- Compile
- Conclude
- Contrast
- Critique
- Decide
- Defend
- Describe
- Develop
- Differentiate
- Distinguish
- Examine
- Explain
- Formulate
- Hypothesize
- Identify
- Infer
- Interpret
- Investigate
- Judge
- Justify
- Reorganize
- Solve
- Support

Tasks at Level 4

Performance Verbs associated with Level 4

- Require extended thinking and complex reasoning over an extended period of time.
- Expects students to transfer their learning to novel, complex and "messy" situations.
- Requires students to devise an approach among many alternatives for how to approach the task or problem.
- May require students to develop a hypothesis and perform complex analysis.
- Appraise
- Connect
- Create
- Critique
- Design
- Evaluate

- Judge
- Justify
- Prove
- Report
- Transfer
- Synthesize

Source: McTighe and Wiggins (2004)

The task establishes a meaningful, real-world (i.e., "authentic") context.

If you have ever watched a house or apartment being constructed, you know that carpenters frame out the individual rooms to outline the walls, doors, windows, closets and ceiling based on the dimensions specified in a blueprint. This framing guides the installation of sheetrock (drywall) on the walls and ceiling, etc. Then, the windows and doors are installed and the finishing touches (e.g., painting, carpeting) applied. The idea of framing applies to the construction of performance tasks as well!

Grant Wiggins and I created a task design frame based on the acronym, G.R.A.S.P.S. Here are the **G.R.A.S.P.S.** elements that are used to frame a performance task: (1) a real-world **Goal**; (2) a meaningful **Role** for the student; (3) authentic (or simulated) **Audience**(s); (4) a contextualized **Situation** that involves real-world application; (5) student-generated **Products** and **Performances**; and (6) performance Standards (criteria) by which successful performance would be judged. Figure 3 presents this practical task design tool containing associated prompts for each of the G.R.A.S.P.S. elements.

Figure 3 — G.R.A.S.P.S. Design Tool

Directions: Use the following prompts to brainstorm ways of establishing an authentic context for performance tasks if needed. (Note: The goal of this tool is not to fill in all of the blanks. Rather, use whatever prompts apply to help you generate ideas to embellish a task.)
Goal
Your task is _____
The goal is to _____
The problem/challenge is _____
The obstacle(s) to overcome is (are) _____
Role

You are _____
You have been asked to _____
Your job is _____
Audience
Your client(s) is (are) _____
The target audience is _____
You need to convince _____
Situation
The context you find yourself in is _____
The challenge involves dealing with _____
Product/Performance and Purpose
You will create a _____
in order to _____

You need to develop _____
so that _____
Standards & Criteria for Success
Your performance needs to _____
Your work will be judged by _____
Your product must meet the following standards _____
A successful result will _____

Source: McTighe and Wiggins (2004)

Here is a performance task that was created using the G.R.A.S.P.S. elements.

State Tour

The state Tourism Office has hired you to plan a tour of your state for a group of six foreign exchange students (who speak English) to help them understand the state's history, geography, economy and culture. Plan your tour so that the visitors are shown sites that will teach them about the state and show the ways that it has influenced the nation's development. You should prepare a written

tour itinerary, including an explanation of why each site was selected. Include a map tracing the route for the four-day tour and a budget for the trip.

The task includes criteria/rubric(s) targeting distinct traits.

Since authentic tasks do not typically result in a single, correct answer, student products and performances need to be judged against appropriate criteria aligned to the goals being assessed. Clearly defined and aligned criteria enable defensible, judgment-based evaluation by teachers and self-assessment by learners. I will devote a future blog post to the topic of criteria and rubrics.

The task directions for students are clear.

A key feature of authentic performance tasks is their "open ended" nature. However, this feature can also inject ambiguity. Sometimes students will interpret the task differently than the teacher intended and go off on unproductive tangents. Here are three practical ways of checking task clarity and getting feedback for improving the directions if needed:

- Show your draft task to a teacher from a different subject or grade level and ask them to tell what they think the outcomes or standards are; what students would need to do to successfully complete the task; and what the key evaluative criteria should be. If they have difficulty with any of these questions, you probably need to refine/sharpen the task directions.
- Conduct a "pilot test" of a draft task to see if and when students become confused or go off on unproductive tangents. Revise the directions based on this feedback.
- Following their work on a task, ask your students to offer edits to the task directions to make them clearer for next year's students.

The task allows students some appropriate choice/variety.

The open-ended nature of performance tasks allows teachers to offer their students options. Students *may* be give choice(s) about:

1. Task Topic — For example, if the outcome involves research, then students might be allowed to pick the topic or question for their investigation.
2. Product/Performance — For example, if a performance task focuses on a concept in social studies or science, learners may be given some options regarding how they demonstrate their thinking and learning, such as a poster, blog, or an oral presentation.
3. Audience — For some tasks, it may be appropriate to allow the students to identify a target audience (e.g., readers of a community newspaper, younger students, viewers of a website) for their product or performance.

Ultimately, the purpose of the task will determine *if* and *when* students should be given choices, and if so, which are the appropriate options.

The task effectively integrates two or more subject areas.

In the wider world beyond the school, most issues and problems do not present themselves neatly within subject area "silos." While performance tasks can certainly be content-specific (e.g., mathematics, science, social studies), they also provide a vehicle for integrating two or more subjects and/or weaving in 21st century skills (4Cs). Indeed, the more "authentic" the context, the more likely it will be to involve more than a single subject.

One natural way of integrating subjects is to include English/Language Arts processes — reading, research, and/or communication (e.g., writing, graphics, oral or technology presentation) to tasks in content areas like science, social studies, business, and health/physical education. Such tasks encourage students to see meaningful learning as integrated, rather than something that occurs in isolated subjects and segments.

The task incorporates appropriate use of technology.

Authentic performance tasks offer many opportunities for involving students in the purposeful and productive use of technology—for finding information, processing it, interacting with others and communicating. Of course, today's students are truly digital natives and it makes sense to let them play in the digital sandbox. Increasingly, teachers are finding that the incorporation of digital tools can transform a mundane task and engage more learners. I will devote a future blog post to ideas for "upgrading" performance tasks through technology.

Conclusion

The design of authentic performance tasks, like any writing or composing process, is iterative in nature. It is very common for task developers to revise task directions, add options for students or modify the evaluative criteria as the task design evolves. Additionally, feedback from self-assessment, peer review and classroom implementation invariably suggests further refinements to the task and associated rubric(s).

Remember to always keep the "end in mind" when designing performance tasks. The goal of the task is to address and assess targeted learning outcomes, not to simply offer "cool" products, entertaining technology or interesting scenarios. The main goal is to design rich tasks that will promote meaningful learning while gathering evidence of students' abilities to apply their learning in authentic contexts.

Here are examples of performance tasks from an online resource called Defined STEM (www.DefinedSTEM.com) where you can find hundreds of standards-aligned K-12 performance tasks:

[Ancient Engineer: Roman Roads (gr.3)]

[Baseball Bat Analyst (gr.7)]

[Mars Rover (gr.10)]