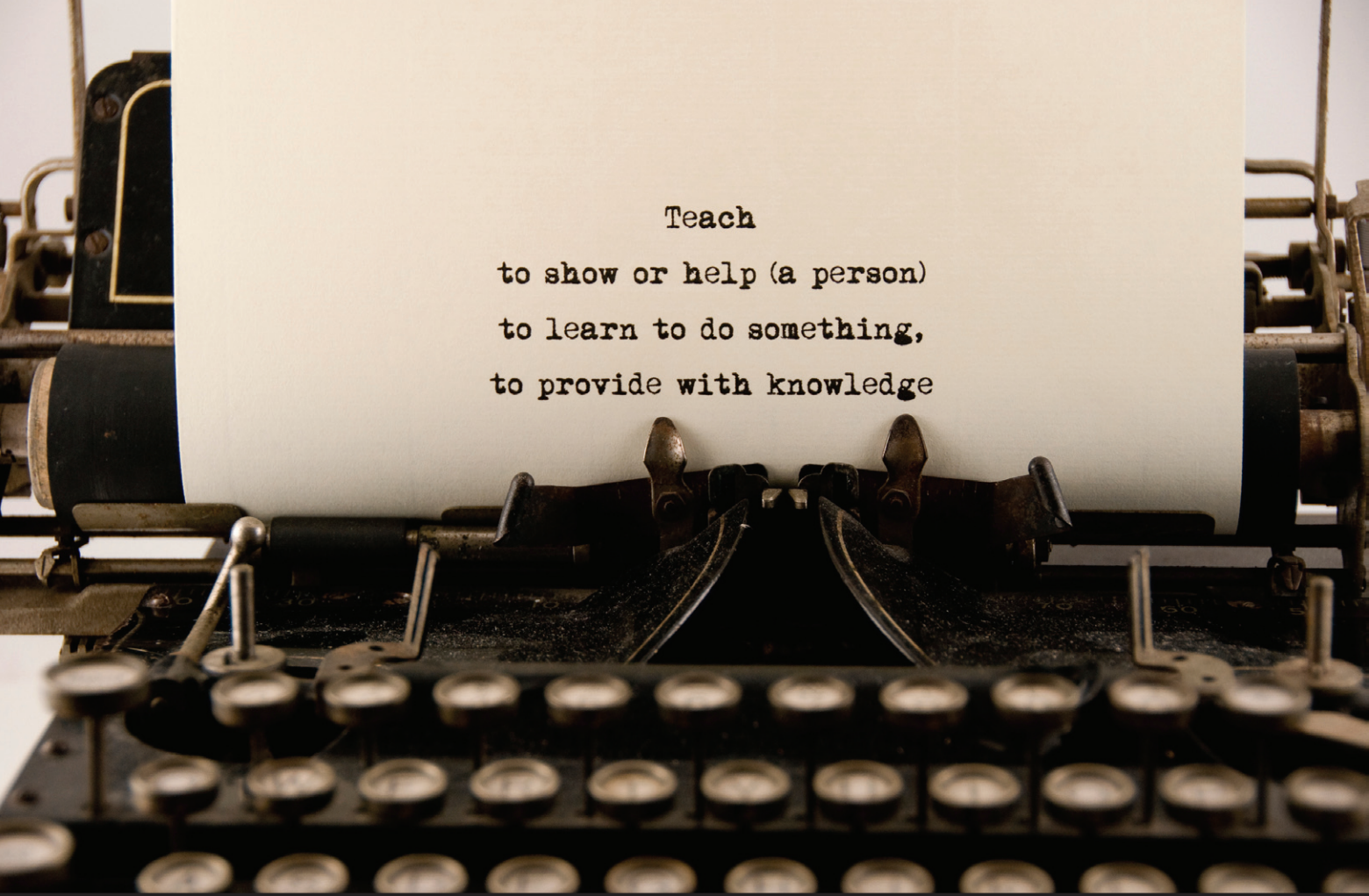




Teach
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TAKING TEACHING TO (PERFORMANCE) TASK:

LINKING PEDAGOGICAL AND ASSESSMENT PRACTICES

BY MARC CHUN

Marc Chun is director of education at the Council for Aid to Education. He is the founder of CLA in the Classroom and, with the assistance of Esther Hong and Petra Suric, the Performance Task Academy. In conjunction with that work, he created the Performance Task Template and the Task-o-Matic.

Imagine a typical student taking an average set of courses. She has to complete a laboratory write-up for chemistry, write a research paper for linguistics, finish a problem set for mathematics, cram for a pop quiz in religious studies, and write an essay for her composition class. Her professors almost exclusively lecture (which, it's been said, is a way for information to travel from an instructor's lecture notes to the student's notebook without engaging the brains of either). And somehow she is supposed to not only learn the course content but also develop the critical thinking skills her college touts as central to its mission.

Just as we understand that what is taught is not the same as what is learned, we also know that if the goal is to ensure that students have gained knowledge and skills particular to an individual course, it is insufficient to focus solely on teaching without also measuring what was actually learned. Because most teaching is done in the classroom, most assessment of learning (in the form of grades and the evaluation of examinations, papers, and other projects) is done by faculty for their own courses.

But since a college or university's collective learning goals, such as the development of higher-order thinking skills, are not the sole province of any single course or faculty member, the assessment of them needs to track the effects on the student of the entire institution's efforts. And yet rarely (if ever) do the grades in an individual course include explicit assessment of the higher-order thinking skills resulting from the whole of the students' education.

It is an empty exercise to assess student learning without providing a means to adjust teaching in response to deficiencies revealed through the information gleaned from that assessment. Yet when institutions *do* assess students' higher-order learning via, for example, standardized tests administered by external agencies, faculty often see the results as disconnected from classroom learning goals and practice. This makes it unlikely that the link between teaching and assessment will be established.

So how can this important linkage be made? One precondition is to have the assessment align with student learning objectives so that what faculty are teaching maps directly onto what is being assessed. However, a way to achieve even closer alignment is to seek convergence between pedagogical practice and assessment tools: in other words, for an institution to teach and assess *in the same way*. Teaching and assessment—so often seen as at odds—instead become coterminous.

To make the learning even more powerful, this can also be done so that both the teaching and assessment mimic how the

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skills or knowledge will eventually be used. Consider driving, where the pedagogical practice of behind-the-wheel training relates directly to a driving test that also corresponds to driving a car after earning the license. Educational programs with a direct link to a corresponding profession—teaching, nursing, or engineering, for example—often capitalize on such alignment.

What I will present here is the analog for higher-order thinking skills for which we may not see an obvious professional role. This strategy is illustrated by institutions

that use the Collegiate Learning Assessment (CLA) to assess cumulative student learning at the institution and also use CLA in the Classroom to both assess those skills *and* to promote student learning. (For more information, visit www.claintheclassroom.org.)

HIGHER-ORDER THINKING SKILLS AND THE CLA

Virtually all colleges and universities will name critical thinking as a key objective of their undergraduate education. In fact Derek Bok, in *Our Underachieving Colleges* (2006), notes that ninety percent of faculty feel that critical thinking is the most important goal of an undergraduate education. Despite the fact that there are numerous conceptual definitions of critical thinking, it is generally safe to think of it as a form of higher-order thinking, along with analytic reasoning and problem solving.

When we turn to the literature to inventory the constellation of behaviors that form an operational definition of critical thinking, we end up with a list that includes considering an issue from multiple perspectives, critically examining evidence (and attending to information that may run counter to or disconfirm initial ideas), valuing claims that are backed by appropriate and adequate evidence, reasoning objectively and dispassionately, and arriving at informed judgments and decisions. The CLA assesses this set of skills through the use of performance tasks. When using the cross-sectional model, separate cohorts of freshmen/first-year students and seniors complete these tasks; their open-ended responses are scored, and the change (or value added) is calculated, taking into account the students' initial ability. (For more information about the CLA, visit www.cae.org/cla.)

WHAT ARE PERFORMANCE TASKS?

There has been a long-standing commitment in education to solving “real problems.” In his 1937 *Experience in Education*, philosopher John Dewey argued that “education is not a preparation for life; education is life itself.” Dewey advanced the

idea that learners need to experience what is being learned in order to truly understand it.

A range of curricular and pedagogical approaches that enable students to experience course content have emerged since Dewey. Variouslly dubbed “inquiry-based learning” and “problem-based learning,” such approaches have been framed as alternatives to traditional pedagogical strategies such as the lecture. There is sufficient conceptual overlap between these approaches that for the purposes here, they will be discussed together; however, this should not be seen as an attempt to disregard the nuanced differences between them.

Assessment tasks that align with these active learning strategies (called “authentic” assessments) present students with a complex, real-world challenge in which the scenario, role, process, and product are all authentic; they must then demonstrate that they have the skills and knowledge to complete the task. Thus students actively participate in the problem-solving exercise rather than passively selecting answers—which runs counter to the assumption that if students do well on a multiple-choice test that focuses solely on content, they will know how to use the information in a real-world context.

In a conventional classroom, a test is used after the teaching has been completed to determine how much of the content students have retained. But a performance task can simultaneously facilitate student learning and measure demonstrated ability. Thus teaching, learning, and assessment all take place as the student performs the task.

Finally, the ultimate goal of teaching is the development in students of transferrable skills and knowledge. Arguably, if they complete a sufficient number of performance tasks, students will not only master the content knowledge and skills for a particular course, but they will also gain the practice they need to be better critical thinkers when they face novel scenarios or problems, either within the same domain or across domains.

THE PERFORMANCE TASK ACADEMY

Creating performance tasks as standardized assessment tools requires a high level of expertise and the investment of significant time and resources. A team of measurement scientists spends 18 months building each of the performance tasks used as part of the CLA. These tasks must meet the highest standards of reliability and validity, and the process includes numerous rounds of field-testing, revision, and calibration.

However, performance tasks that can be used as pedagogical tools in the classroom in most cases need not adhere to such rigorous psychometric standards. The Performance Task Academy was developed to train faculty to create performance tasks for use in their classrooms; the process is streamlined so that task development is not inordinately time-consuming or labor-intensive. This part of the CLA in the Classroom initiative, which had initial funding support from the Teagle Foundation, is a two-day faculty-development workshop that includes a mixture of mini-lectures, small-group activities, large-group discussions, and independent work.

The first day of the Academy focuses on authentic assessment practices, performance tasks, rubrics, and diagnostic feedback. The second day begins with a series of activities to help faculty learn how to put these concepts into practice. The Academy employs elements of the “backwards design”

FIGURE 1 PERFORMANCE TASK FEATURES

Real-world scenario: Students assume roles in a scenario that is based in the “real world” and contains the types of problems they might need to solve in the future. The more the students can imagine themselves in the scenario, the more engaged they are likely to be. The scenario might directly relate to their likely careers (e.g., students in a journalism program might be asked to write a magazine article). They may be asked to apply course knowledge and skills outside of a career (e.g., students who have taken biology might advise a friend with cancer). Or they may need to apply their knowledge in areas unrelated to a vocation and in a way that represents a significant transfer of knowledge and skills (e.g., by voting in an election or selecting day care for their children).

Authentic, complex process: The scenario reflects the complexity and ambiguity of real-world challenges, where there might not be a right or wrong answer, where solutions might not be obvious or given, where information might be conflicting or partial, and where there might be competing frameworks or positions from which to view the situation. To complete the task, students go through a process that approximates what they would do if they were actually facing that situation.

Higher-order thinking: The task requires students to engage in critical thinking, analytic reasoning, and problem solving. The focus is on analyzing, synthesizing, and applying evidence in order to arrive at a judgment or decision. There may be cognitive conflict, in that the solution may cause other problems. There often is an element of creativity involved as well.

Authentic performance: The “product” the students create reflects what someone assuming that role would produce: a memo, presentation, or other write-up. So, unless the scenario involves taking on the role of a graduate student, it is unlikely that it will be an academic paper.

Transparent evaluation criteria: The learning outcomes drive the creation of the task. They and the evaluation criteria and rubrics are made clear to students, in part so they can evaluate their own work and in part so they can get diagnostic feedback on their strengths and weaknesses. The evaluation is typically criterion referenced (rather than norm referenced).

approach developed by Grant Wiggins and Jay McTighe. Starting with the learning outcomes students should attain, faculty create performance tasks that will both enable and assess this learning. The tasks explicitly incorporate both disciplinary content and critical thinking and other higher-order skills. Faculty participants then spend the balance of the day creating a performance task and an accompanying rubric that they can use in their own classrooms, about which they receive feedback from each other and from the facilitators.

The Academy leverages retired CLA performance tasks as a guide for faculty. The “Performance Task Template” is essentially a fill-in-the-blank model; recently launched is the “Task-o-Matic,” which aids those faculty who have mastered the use of the template and now want to create a wider range of performance tasks.

SOME EXAMPLES

To date, approximately 1000 faculty members have participated in one of the more than 30 Academies offered since the program started in March 2008. The stories of five of these faculty members who created performance tasks—all of whom work at institutions that are part of a CLA consortium organized by the Council of Independent Colleges—follow.

A Performance Task in the Natural Sciences: Moving Beyond Laboratories

Although natural science courses are often accompanied by laboratory sections that provide students with hands-on experience running experiments, faculty can find other ways to involve their students in activities that include practice in higher-order thinking skills while still remaining relevant to the discipline. One example comes from Kristy Miller, an assistant professor of chemistry at the University of Evansville in Indiana.

Miller had observed that although chemistry students are “bombarded with content,” they are not asked to *use* the knowledge and skills that they learn. Even in the laboratory sections, “students know what the results should be, what compound they should make, and they can guess what went wrong,” she said. One thing she found intriguing about the use of performance tasks was that she could create assignments in which students didn’t know what the results should be.

Miller used the Performance Task Template provided at the Academy and said that it only took her three or four hours to create a task in which students are presented with a scenario in which a report that aspartame (the artificial sweetener in diet soda) causes headaches is being used to justify a ban of the substance in favor of sucralose (see Example 1).

When she solicited student feedback, she was “overwhelmed” by the response. All of the students in her course, even those who did not do particularly well, told her that they enjoyed completing the task. She also found that the task

helped to reveal deficiencies in the students’ understanding—for example, many confused correlation and causation. So she noted, “From that, I learned something too—what I can do to incorporate help with that skill.”

Although performance tasks should not replace laboratories, the

EXAMPLE 1 ARTIFICIAL SWEETENERS

Scenario: You are an advisor to State Senator Nathan Dulce, who is running for reelection against County Commissioner Pat Sauer. Prior to the election, a bill is proposed in the state senate that would ban aspartame, an artificial sweetener, from being added to any soft drink or food product. Senator Dulce is opposed to the bill.

Pat Sauer made two arguments in favor of the bill during a recent TV interview: First, Sauer said that because of the strong correlation between the number of people who consume aspartame and headaches, “banning aspartame would improve the health of the state’s citizens.” Second, he said that “aspartame should be replaced with sucralose.”

Documents:

- Private investigator memo regarding Sauer’s connection to the company that produces Splenda® sweetener
- Local newspaper article opposing aspartame
- Data from the Department of Health about headaches and aspartame
- Research brief discussing the advantages of sucralose for diabetics
- Chart used by Sauer linking aspartame and headaches
- Abstracts of research about aspartame and headaches

Task: Senator Dulce wants to make sure he votes appropriately on the aspartame bill, so he has asked you to analyze the strengths and/or limitations of each of Sauer’s two main points.

— Created by Kristy Miller, University of Evansville

task Miller created gave her students a chance to practice using higher-order thinking and to rehearse ways in which they might use their chemistry knowledge outside of the laboratory.

A Performance Task in the Humanities: Engaging in a Real-World Scholarly Debate:

Christopher LeCluyse is an assistant professor of English and the director of the Writing Center at Westminster College in Salt Lake City, Utah. LeCluyse said he created a task that would have students think like linguists—that is, rather than having them simply absorb scholars’ interpretations of the data, he wanted his students to address a real-world scholarly debate by considering competing methods and interpretations of the data in order to come to their own judgments. In his task—which of the examples presented here hews most closely to a traditional academic assignment—he provided the students with different maps of dialect regions in the United States and the data to make sense of the maps (see Example 2).

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EXAMPLE 2 MAPPING DIALECTS

Scenario: You are a linguist seeking to reconcile competing maps of U.S. dialect regions. One by Craig Carver, based on lexical data from the *Dictionary of American Regional English*, shows several dialect regions extending from California to the Mississippi River and separate regions for the Northwest and Southwest, Northern and Southern California, the Central West, Colorado West, and Utah West. Another by William Labov and his colleagues, based on phonological data from the TELSUR telephone survey, posits a single dialect region for the entire western U.S. separate from the Midlands.

Documents:

- Carver map
- Methods of the *Dictionary of American Regional English*
- Words particular to U.S. dialect regions
- Atlas of North American English dialect boundaries
- Sample methods of the TELSUR Project
- Labov essay on features of the Western dialect regions

Task: Prepare a report explaining which map you believe more accurately reflects language in the Western U.S. and why.

— Created by Christopher LeCluyse, Westminster College

LeCluyse said he likes how open-ended the performance tasks can be. “I feel like the students engaged in high-level academic inquiry with competing interpretations, where there isn’t a clear black-and-white example. As a professional, one has to pitch a flag, but one can marshal enough evidence for either side, so I felt like this was crucial critical thinking about assessing the validity of resources, the quality of resources, and their relevance. Then they had to marshal resources to deal with competing interpretations.” He continued, “So they arrived at engaging with those questions in a more organic and lasting way than if I just started out with, ‘Here are two competing conceptions ...’” LeCluyse said he realized the task served as a

good way to diagnose where the students’ skill levels were. He said he wanted to give them feedback about their thinking and found that the task did this in a way a traditional

test would not. As he explained, “In looking at their responses I found that they were quite skilled at analyzing evidence but could further develop the reasoning they provided to support their arguments.”

A Performance Task in Mathematics: Seeking Authentic Applications

Jerry Kruse is an associate professor of information technology, computer science, and mathematics at Juniata College. In his task, students are presented with a scenario in which they are given funds to turn a campus classroom into a student activity center (see Example 3). Receipt of the money is delayed, so the students have to consider several different loan options. They do a detailed analysis and consider whether they will be able to pay off the loan; this involves a series of computations as the project runs its course.

EXAMPLE 3 FOUNDATION SUPPORT FOR A CAMPUS MEETING ROOM

Scenario: You are the class treasurer at your college. Representatives of the Laysmall Foundation, a generous benefactor of the college, were touring the campus and were disappointed in the condition of the meeting facilities in the Office of Student Activities. They subsequently decided to donate \$5,000 for an improved meeting room. For tax purposes, though, the foundation will only be able to make the donation after the close of the fiscal year, on June 30. But it is in the college’s budgetary best interest to make the purchases before the end of the fiscal year. To resolve this difficulty, the vice president of finance is recommending a short-term loan to cover the immediate purchases, which will then be paid off when the foundation makes its donation.

Documents:

- Offer letter from the Laysmall Foundation to renovate the meeting space
- Email from the vice president of finance to the director of student activities
- Excerpt from the Countrywide.com Webpage with the loan offer
- Advertisement from BankofAmerica.com with the loan offer
- Excerpt from the college newspaper

Task: The director of student activities asks you to prepare the preliminary recommendation for renovation and financing; a description or diagram of the renovated space, including the suggested furniture and appliances; a list of the suggested purchases and their prices; and an analysis of each loan option, including the total interest paid over the life of the loan. She then wants you to recommend which she should choose.

— Created by Jerry Kruse, Juniata College

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Kruse said that by giving students a chance to use data in this way, he has greater confidence that they have acquired skills that they can “take to the real world, and when confronted with different data sources, can try to resolve the differences.” He added, “It’s not like doing 30 algebra problems or 30 derivatives that are context-free. Students might not do these exact things, but it felt like something close to what they might do.”

Students in Kruse’s courses expressed their enthusiasm for his performance tasks. Student Roy Holm noted, “The performance tasks are our favorite part of [the class],” while Erica Quinn reported, “I work harder on the performance tasks than a normal activity, but I enjoy the challenge.”

A key topic at the Performance Task Academies is the nature of tasks; a hallmark of a good one is that it is engaging to students, such that doing more work leads them to be drawn into the task. Kruse joked that he told his students that his per-

formance tasks were “like an onion—that as you peel it you find more and more layers, but it also makes you cry.”

A Performance Task that Focuses on Institutional Outcomes

In addition to serving as the acting associate dean of institutional assessment and accreditation, Joel Frederickson is a professor and chairperson of the psychology department at Bethel University, a Christian liberal arts college.

Frederickson said that lower senior scores on the CLA provided the motivation for him and a professor of English, Marion Larson, to attend an Academy. They decided to create a task that would help them to better assess one of Bethel’s general education objectives: Biblical hermeneutics. Together they created one that features a prominent pastor who advocates childrearing based on the “spare the rod, spoil the child” approach (see Example 4).

EXAMPLE 4 PARENTS USING CORPORAL PUNISHMENT

Scenario: You work for a non-profit Christian organization whose mission is to provide parents with “Christ-centered” parenting information. The board of directors would like the next newsletter to address whether or not Christian parents should spank their children. This issue has recently been discussed in many churches because an influential pastor of a large congregation in your community, Pastor Handy, has argued that parents should spank their children when they become unruly and disobedient. Handy has preached that the “epidemic of disobedience” seen today in children and teenagers is due to the fact that parents are less likely to spank their children than they were 20 years ago.

Handy made three arguments in his last sermon, entitled “Sparing the rod is harming our families”: (1) The Bible instructs parents to use corporal punishment to discipline unruly children; (2) The reduction in the use of spanking is a major cause of the increase in crime among teenagers; (3) There are scientific studies that support the use of spanking as an effective form of discipline.

Documents:

- Pastor Handy’s sermon notes, which include Biblical passages such as Proverbs 13:24: “He that spares his rod hates his son: but he that loves him chastens him sometimes”
- Graph that indicates that as the use of spanking by parents has decreased, the number of teenagers committing crimes has increased
- Table including data on aggravated-assault arrests per 100,000 juveniles in the US by year
- Transcript of a radio show in which the host talks about how her sons, whom she spanked when they were younger, were very obedient and respectful as teenagers. However her brother, who refused to spank his children, is now “reaping what he has sowed” because his children have become unruly teenagers
- Article by a professor at State University detailing the dangers of not spanking disobedient children
- Journal article abstracts arguing the case against corporal punishment

Task: Prepare a report to the board of directors addressing Pastor Handy’s claims.

— Created by Joel Frederickson and Marion Larson, Bethel University

As he observed the students completing the task, Frederickson noted that the seniors were very engaged—which he found noteworthy, particularly since no grade was being assigned. “They took quite a bit of time, going through the information, thinking through what they were going to write.” When asked why he thought the students seemed so interested, he hypothesized that they were thinking, “This is something I might really have to do; this is important versus the classic term papers.” He added, “Unless they go to grad school, they are not going to write [academic papers] in any job setting.”

Frederickson admitted that he feared that he wouldn’t be able to see any difference between freshmen and seniors. Although he recognized he only has preliminary data, he said he was pleasantly surprised to find that he could see the differences, with seniors performing better. They demonstrated an understanding that there is more than one way to interpret Biblical passages, which is consistent with Bethel’s goal to get students beyond a literal reading of the Bible and to develop in them a more scholarly approach to the text.

Seniors told Frederickson that they felt “primed” through their general education curriculum to solve problems like the ones presented in the performance task. For Frederickson, this was validation that the campus’s “general education is doing its job.”

Frederickson said that tasks were more in line with the faculty’s priorities for the curriculum than multiple-choice tests. In the past Bethel had used a combination of assessment tools, one to assess critical thinking and another to assess writing. He noted that each “got at some of what we care about, but not

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everything.” He said that the performance task “got at all those things in one shot, and in a more nuanced way, as compared to what we did in three different types of assessment.”

Performance Tasks Across Disciplines

Katriccia Pierson is the associate dean for academic assessment and an assistant professor of English at William Woods College. She said, “Our students tend to be well below or below [expected] on the performance tasks [on the CLA], and when the Academies started, I went to one and had a history professor who was very skeptical join me. I had been talking about performance tasks and simulations and just was not getting anywhere.” She said faculty asked why they should change their ways, telling her that “the onus is on students to learn, not to teach in a different way. I learned from my professors through lecture; why can’t they learn the same way?” Pierson continued, “I took the

biggest skeptic, he was a history professor, to go with me, and he was more or less sold when he saw what this was, how the assignment pulled things together.” She said they had an energized discussion on the flight back to campus.

According to Pierson, “The challenge is getting faculty to see what they are doing in the classroom isn’t working. ... I do think students are not the same as ten years ago. They have to *do*, not just sit and listen.” While she acknowledged that “the students like lectures because all they have to do is sit there,”

she also noted that “a skill isn’t being developed” when they don’t engage with the material. Pierson said that until faculty can prove that students develop higher-order thinking skills just by listening to a lecture, she will “insist that they do assignments that show these skills are being developed.”

In completing the performance tasks Pierson used in the composition courses she teaches, students worked in groups, which she said they enjoyed. They complained that it was more work, but they also said “that it feels like skills they can use on the job. That’s the key for students.” Students also enjoyed the role playing and appreciated the fact that the task was not purely an academic exercise; they saw the value in making decisions and selected the right data to help them build a case (see Example 5).

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EXAMPLE 5

ANIMAL TESTING

Scenario: You are assistant to the director of operations at Xenocybernetics, a pharmaceutical company that has used animal testing.

Documents:

- Descriptions of squabbles among employees
- Hostile emails from the public
- Newspaper editorials
- Articles on the benefits of animal testing
- Industry guidelines on animal testing
- Statistics on animal testing

Task: Determine whether a negative portrayal of the company in a newspaper article was accurate; also, determine whether the company's director has been libeled.

— Created by Katricia Pierson, William Woods University

Pierson remarked she has heard faculty report that they can see the potential for creating cross-disciplinary tasks. As she said,

If faculty can show how learning in finite math courses and psychology both use statistics and they can tie that together in their general education requirements ... students will actually have a liberal arts education. Right now they do not get a liberal arts education; they get some math, art, psychology, a little bit of this, a bit of that, but nowhere do they realize it works together. ... Performance tasks pull from different disciplines, to show how it works together.

TAKING TEACHING TO TASK

These five professors all used the streamlined approach they learned at the Performance Task Academy to create their tasks, in some cases completing them in a matter of hours or days.

They all developed engaging pedagogical tools that promote student learning and give students practice in (while providing feedback on) the development of higher-order thinking skills, without sacrificing course content. These tasks differ from case studies or problem-based learning exercises in that the higher-order thinking skills they require are also systematically assessed at the institutional level through the use of the CLA. Also, the typical rift between pedagogical practice and assessment approaches has been minimized: the tasks bridge the gap.

In this approach to learning and assessment, the standard critique of “teaching to the test” does not come into play. Because these faculty members agree that that the skills they are assessing matter and en-

dorse the use of performance tasks as a valuable means to both teach and assess them, there is no tension between the two. And the professors profiled here were not motivated to increase their institutions' CLA scores as an end in itself. Rather, they were teaching to learning outcomes that were important to them *and* that coincide with the ones the CLA measures.

Further, these faculty-created tasks not only help students develop skills by giving them practice and opportunities for diagnostic feedback, but are also structured to show students how they might use the knowledge and skills they are developing after they graduate—be that in their professional, civic or personal roles. Students see how their chemistry training might help then in a situation where they are advising a senator, how their understanding of language could enable them to make sense of linguistic data, how their mathematics training might come in handy in budgeting and finance, how Biblical hermeneutics can help them make parenting choices, and how composition practice can help distinguish between accurate reporting and libel in the media.

Since all of these tasks also include practice in considering multiple perspectives, examining evidence, and evaluating claims, as well as arriving at judgments or decisions, they also help students develop the ability to transfer these skills to novel situations. (An aside: there is also performance task library that provides faculty with a chance to share their tasks with each other. Kruse has already borrowed the artificial sweeteners task Miller shared with him. Because it is such a rich, multi-faceted case, he uses it to assess quantitative literacy in his mathematics courses.)

These faculty members have taken teaching to task by circumventing the kinds of lecturing and term papers that they (and their students) knew were not helping students acquire the learning they all cared about. Performance tasks provide one viable approach to the development of transferrable higher-order learning, and of course they are not a panacea. However, to consider their powerful potential, let's again imagine that hypothetical student introduced at the beginning of this article.

In this new scenario, she is still taking those same five courses, but now from the faculty members profiled here. She is no longer doing that laboratory write-up, finishing the problem set, or cramming for the quiz; instead she is completing performance tasks.

From completely different disciplinary starting points, she still learns important course content through engaging course projects, but she has repeated chances to practice using her higher-order thinking skills in an authentic manner. There is still empirical research to be done to measure the effects of these practices, but I expect that her higher-order thinking skills would be developed to a greater degree, as reflected in her performance on assessment measures like the CLA, and that she would be better equipped to use these skills in a range of situations she faces later in life.

With a tip of the hat to Dewey, performance tasks are not preparation for life; they are life itself. ☐

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