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## Assessing What We Value

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In the June 2010 *Harvard Business Review*, Dan Ariely, a professor of psychology and behavioral economics at Duke University, wrote a column entitled "You Are What You Measure." In it, he thoughtfully prods business leaders to consider the problematic correlation between the tools for measuring progress and actual organizational progress. "Human beings," writes Ariely, "will adjust behavior based on the metrics they're held against. What you measure is what you'll get."<sup>1</sup>

In short, assessments drive outcomes, but these outcomes may not be optimal in either the short or long run.

Like many educators of a certain age, my school experience was characterized by a dependency on a significant amount of rote memorization. In my junior high and high school, teachers facilitated this dependency by scrawling names, dates, equations, and definitions across a chalkboard. My classmates and I would dutifully copy down the information so we could later commit it to memory. The mastery of content through rote memorization, then, would be assessed by exercises that mostly measured my ability to relay this information directly back to teachers, sometimes with application but often without.

Teachers and schools assess what they value in the learning experience. There is a growing awareness in independent and public schools, however, that the skills that have been — and, in some cases, are still being — assessed are not the skills that will optimize our students' ability to be successful in the 21st-century global economy.

In *The Global Achievement Gap*, Tony Wagner writes that "for most students in the last century, a rigorous curriculum meant having to memorize more vocabulary words and do more math problems at night." In the 21st century, these skills are insufficient in and of themselves to successfully prepare our nation's youth for the workplace and global citizenship.<sup>2</sup> Increasingly, what is required of all students is the ability to *think* more than to just *know*. Knowledge, of course, remains important; but it has become ubiquitous and significantly less expensive in its accessibility. What is increasingly needed and rewarded is the ability to analyze, synthesize, apply, and communicate knowledge in creative, often collaborative ways. To that end, schools need to focus on — and assess for — critical thinking, collaboration, creativity, communication, awareness of global citizenship, and character.

Recent changes to the AP biology and chemistry exams reflect the shift away from memorization toward knowledge application. The exams have been redesigned in a way that measures the successful utilization of critical thinking and problem solving as the means to derive a correct response. On some questions, for example, formulas are provided to the test taker as a tool to solve an applied problem, as opposed to the question being predicated on the memorization of the formula itself.

A national survey of corporate and nonprofit leaders reveals crucial insight into the preparation that such leaders are looking for in potential employees in order to productively move their organizations forward in a global economy.

- Ninety-three percent of employers are looking for a demonstrated capacity to think critically, communicate clearly, and solve complex problems; these skills are considered more important than a candidate's undergraduate major.



- Ninety-five percent of employers indicate that they place priority on hiring college graduates with skills that will enable them to contribute to innovation in the workplace.
- More than 75 percent of those surveyed indicate that they want more emphasis to be placed on critical thinking, complex problem solving, written and oral communication, and applied knowledge in *real-world settings*.
- Ninety-five percent of employers believe that it is essential that those they hire demonstrate ethical judgment and integrity, intercultural skills, and the capacity to sustain continued learning.<sup>3</sup>

A Gallup study, furthermore, reveals that workers who self-assess their work as being of a higher quality than the work of others of approximately the same age were most likely to also report being exposed to 21st-century skills, particularly real-world problem solving, during their last year in high school.<sup>4</sup>

Generally, independent schools have never been bastions of rote memorization and "drill-and-kill" instruction. Independent school teachers, moreover, prize their ability to make their subjects come alive for the individual learner. Distinctively, there has never been a one-size-fits-all approach to teaching and learning in independent schools.

Still, many independent school teachers and administrators have been reexamining the degree to which their student assessments reflect their larger teaching and learning goals, especially in light of the need to build the types of skills that will be rewarded in the workplace. In particular, many schools have taken a closer look at their assessments and have made changes that reflect their broader goals to teach the skills that are necessary in today's world.

#### Portrait of a Graduate

At St. George's Independent School (Tennessee), where I am head of school, we emphasize such skills throughout the curriculum. As a means to capture these skills within a specific framework, the faculty and administration engaged in a yearlong collaborative project three years ago to create "The Portrait of a St. George's Graduate." This framework identifies a list of skills and characteristics spread across four quadrants:

- leadership and collaboration;
- citizenship;
- approach to learning; and
- healthy balance of mind, body, and spirit.

Critical thinking, collaboration, communication, creativity, global awareness, and character are interspersed throughout the quadrants in a variety of forms. Far from being a marketing piece, this exercise in backward design guides the school's PK-12 horizontal and vertical curricular alignment. The professional growth of teachers, departments, and divisions depends on our ability to ensure that the skills and characteristics we consider valuable and distinctive in the students' learning experience are being taught sequentially and reflect the defining characteristics of a St. George's education. Because assessments measure what a teacher and a school value, for us this framework informs the creation and evaluation of the assessments we use throughout the school.

To graduate, a senior at St. George's must successfully complete the Senior Leadership Experience, a two-part capstone learning project. In the first half of this project, students create an experiential learning opportunity involving a vocational or an avocational interest. This experience forms the basis of a personal summative project. Some students elect to write a 20-page research paper that critically explores their interest or passion. Others create something that has meaning and utility and reflects what they have learned through their exploration. Students have written and produced theatrical productions; one created an "app" that would help his parents keep track of his many school responsibilities; several have written books, including two novels and a children's book; and one created Youth in Government and Model United Nations programs for middle school students at an urban charter school. A faculty advisor assesses all projects, and each student must give an oral defense of his or her work in front of a panel of teachers and peers.

In the other half of the Senior Leadership Experience, we place students in groups of five and give them a real-world problem to solve. Each group must collaborate on a solution and, in a timed format, explore the complexity of the problem and present a solution. A panel of faculty members and peers assesses each group on the quality of its collaborative work, analysis of the problem, depth of creativity employed to reach a solution, and the effectiveness of the communication used to present the solution. Several groups have explored infectious diseases, locally and globally; others have proposed initiatives to address the infant mortality rate in Memphis; another group addressed declining graduation rates in public schools by creating a prototype for a "school within a school" and successfully solicited corporate sponsorships to furnish economic incentives and volunteer mentors.

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As a reflection of the degree of importance the school places on this summative assessment of skills, a St. George's student may graduate with distinction based on his or her performance on the Senior Leadership Experience rather than on overall grade point average.

Three years ago, with help from an Edward E. Ford Foundation grant, the school created the St. George's Institute for Citizenship to offer upper school students the opportunity to deeply explore civic engagement during their last two years in high school. Rising juniors are selected to join the institute after completing an application process that includes a writing prompt on what it means to be an engaged and thoughtful citizen. Seniors enrolled in the institute are placed in small groups and must critically assess a local need and/or problem in the Memphis community and provide a proposal that creatively addresses the need or problem. Each group presents its proposal to a panel of local business and social entrepreneurs and is assessed on the creativity and functionality of the proposal, the effectiveness of the collaborative work, and the clarity of the presentation.

Like a growing number of independent schools, for the past four years, St. George's has also given its upper school students the College and Work Readiness Assessment (CWRA), which presents each student with a hypothetical real-world problem to solve. The assessment provides

students with a resource of documents designed to assist in evaluating a problem and implementing a solution. It then evaluates students on their ability to thoughtfully analyze the problem and on the effectiveness of their written communication about their solution. Because every student takes the CWRA in the 9th and 12th grades, with a random sampling of students who take the test in 10th and 11th grades, the school can measure the growth of critical-thinking, problem-solving, and communication skills over the four years of high school.

### **The Scaffolding of Skills**

Many thoughtful educators rightfully assert that these 21st-century skills are nothing new in education, especially in independent schools. What is new, however, is the growing degree of emphasis being placed on these skills as the basis of value and reward in the 21st-century economy. As such, it is important that educators work to ensure that their assessments emphasize these skills, and not just in the final year of high school.

Students in the lower school at St. George's, for example, are required to give public presentations beginning with a short speech to the class in pre-kindergarten. By fifth grade, students must deliver a prepared speech to the lower school during chapel. Also, each fifth-grader spends a day in a simulated city and is given a "real-world job" to do. The simulation teaches students about the interrelatedness of community and work.

In middle school and upper school, students are assessed in project-based learning in which teachers use rubrics to evaluate student analysis, collaboration, creativity, and communication. Students in seventh-grade science, for example, are given a "CSI" crime (after the popular TV series) to solve involving school personnel (I have been both victim and culprit). In ninth-grade science, students must assemble a "Rube Goldberg" machine that performs a simple task in a complex way. They are assessed not only on their machine's ability to perform the simple task, but also on the complexity of the design and quality of the collaboration involved to complete the project.

### **The Movement for New Assessment**

Other schools, of course, are taking steps similar to St. George's. In 2012, The Lovett School (Georgia) forged its "Vision for Learning" around experiences that inspire its students to "think critically, communicate effectively, engage creatively, and collaborate purposefully." As a result of this statement, the school reenvisioned some existing courses and created others, including a new online course, The Ethics of Global Citizenship. The course is a collaborative effort between a teacher at Lovett and a teacher at St. Luke's School (Connecticut). It addresses the world's interconnectedness and challenges students to grapple with global issues and citizenship in a way that demands critical thinking, clear and effective communication, and meaningful collaboration. Students are assessed on their digital journals, their leadership of online discussions, a written paper, and a collaborative project.

Similarly, the faculty at Mount Vernon Presbyterian School (Georgia) developed the "Mount Vernon Mindsets," a comprehensive core set of interconnected attributes that illustrates the learning goals toward which teachers and students aspire. These learning attributes position students as solution seekers, communicators, creative thinkers, innovators, ethical decision makers, and collaborators. The faculty worked in collaborative teams to create specific PS-12 learning goals. Using rubrics designed by EdLeader21, a professional learning community comprising public and independent school leaders committed to advancing 21st-century education, teachers created a specific rubric system and used eportfolios to assess students' learning through the attributes of the Mount Vernon Mindsets.

Middle school students at The Nueva School (California) create a project utilizing design thinking. Beginning in the seventh grade, students identify a project that will align with their interests and then work throughout the summer before their eighth-grade year and during the school year to deeply explore this topic from multiple perspectives. Working with mentors, the students aim to create a product, process, or innovation in the field of study that has purpose and meaning and that reflects the 18 months of critical thinking and creativity. They then present this work to the school community during an open house that includes demonstrations, performances, exhibitions, and project artifacts. The school's innovation lab director both guides students through this 18-month exploration process and assesses the projects.

A core component of a new strategic initiative at The McDonogh School (Maryland) is reexamining its teaching and learning objectives to ensure that students are being prepared not just for college, but also for the workplace. Included in this self-study is a critical examination of how and why assessments are created and used. As a measure of a student's progress, the school is focused on including more noncognitive skills such as grit, self-confidence, and cross-cultural awareness. Additionally, the school has identified the need to be more pronounced in teaching and assessing communication skills. With a goal of helping students become exceptional communicators, the new initiative will focus on developing interdisciplinary communication, public speaking in another language, and technical communication. Toward that end, students begin taking Mandarin and Spanish in kindergarten and continue language studies through three years at the high school level — aiming for fluency. Upper school students also take classes that teach the development of entrepreneurial skills and how to code technical information for programming.

### **The Path Forward**

Because time is the most cherished commodity in all schools, any shifts toward including more project-based learning, assessments involving real-world problems, and creative collaboration must come at the expense of spending less time on previous priorities. While the steps will vary from school to school, those electing to incorporate more 21st-century skills into their learning environments have generally done so by reducing the amount of time and emphasis they had placed on content mastery. For most schools, the operating rationale behind this decision is that priority must be given to developing the skills that students will need to productively, successfully, and creatively analyze, synthesize, and communicate widely accessible content.

If Dan Ariely is right to say assessments measure what a learning environment desires to achieve — and I think he is — then those assessments we employ to advance 21st-century skills in order to best prepare students for a rapidly changing world and workforce will necessarily look and feel different than most previous assessments. School traditions and habits aside, the simplest way to look at the assessment challenges is this: The assessments we use to evaluate our students today should be geared toward their future and not our past.

*William Taylor is head of St. George's Independent School (Tennessee).*

### **Notes**

1. Dan Ariely, "You Are What You Measure," *Harvard Business Review*, June 2010.

2. Tony Wagner, *The Global Achievement Gap*, New York: Basic Books, 2008.

3. Association of American Colleges and Universities, "Employers More Interested in Critical Thinking and Problem Solving Than College Major," April 10, 2013.

4. Gallup Wellbeing, "In the U.S., 21st Century Skills Linked to Work Success," May 30, 2013.

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