

the present should be controlling.”⁶ The mantra of the “claims of the present” has been repeated so often that we must ask: Is it perhaps in the nature of a good education to be slightly out of step with the present? Could it be that in order to endure, an education must be unfettered by the times? Is it possible that the claims of the present—which we often cannot accurately identify—should *not* be controlling?

Perhaps so. Efforts over the decades to bring schools up to date have not worked as intended. They have met with resistance or obstacles; they have caused losses; they have missed the mark. Of course schools should teach critical thinking, problem solving, and other skills; they should help students master new technologies that can further their intellectual development. But they cannot do any of this without a foundation. When hyperbole goes unchecked, the reform loses sight of the complements it needs.

Reformers forget, for instance, that knowledge enhances the very learning process in a number of ways, as Daniel T. Willingham and other cognitive scientists have found.⁷ They forget that fluency in the fundamentals allows students to engage in inquiry. They forget that content is not simply dry matter; it has shape and meaning; it is the result of centuries of critical thought and the basis for future critical thought. To neglect to teach our intellectual and cultural traditions is to limit the kind of thinking that students will be able to do throughout their lives.

What would our schools gain by embracing 21st-century skills, and what would they lose? It is the loss that deserves special attention, as the 21st-century reformers, in their euphoria, have seen only gain in their plans. The gain is possible, but only if we put the

What Does—and What Should—P21 Advocate?

As Diana Senechal explains (see page 4), the education field is replete with faddish reform ideas. Of course, change is essential. Without it, we can't make progress. But not all change is progress—and some changes hinder progress. This is the reality that the 21st-century-skills movement must face head-on. When we look back 5 or 10 years from now, will this movement be a faint memory, another fad that temporarily got in the way of serious educational improvement? Or will it be remembered as the catalyst for tackling tough issues like the achievement gap?

This movement does have the potential to spur real progress. Look at the initial success of the Partnership for 21st Century Skills (P21). It has the backing of several major corporations

as well as influential politicians and educators. But success with students is far from guaranteed. P21 has vocal critics concerned not with the organization's rhetoric, which includes plenty of calls for content plus skills, but with its actual lesson suggestions for teachers. By and large, the critics say, these lessons are much too light on academic content and much too heavy on skills of questionable value.

So the real debate seems to be not about skills versus content, but about the content itself. For example, everyone acknowledges that to develop critical thinking (which seems to be the most sought-after ability), students must have something to think about. What they don't agree on is this: should the content be traditional liberal arts content, or just anything that makes students think? Fortunately, over the past several decades, in hundreds of studies, cognitive scientists have answered this question. Simply put, unless one reaches true expertise (which comes after many years of intensive, post-graduate study and experience), skills do not transfer from one content area to the next. So, in order to think critically about a particular topic, students must study content directly related to that topic. (For more on this, see page 17.)

This doesn't resolve the debate, but it should shift our discussion. Clearly, just any content that makes students think will not do. If students can only think critically about topics they have actually studied, then selection of

content is of the utmost importance.

Here, Lynne Munson and Laura Bornfreund of Common Core initiate a discussion about content that they hope will play out in schoolhouses and statehouses across the country. Common Core, a nonprofit dedicated to the liberal arts, has been an outspoken critic of P21, which is reflected in the first part of the sidebar where Munson and Bornfreund compare some of the lesson suggestions from P21 that they find troubling with much more rigorous content taught in high-performing countries. In the second part of this sidebar, Munson and Bornfreund take on a different task: they present a handful of lesson ideas from P21 that could enhance studies of academic content. After all, everyone supports teaching content and skills—we just need to be determined and energetic enough to develop examples that we all agree are worthy of classroom time. That work will decide whether the 21st-century-skills movement becomes a driver of real improvement or just another fad.

—EDITORS

**BY LYNNE MUNSON AND
LAURA BORNFREUND**

“While American students are spending endless hours preparing to take tests of their basic reading and math skills, their peers in high-performing nations are reading poetry and novels, conducting experiments in chemistry and physics,

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skills in proper perspective, recognizing their long legacy and their dependence on subject matter knowledge.

The classroom that 21st-century-skills proponents envision—a place where students are collaborating, creating, and critiquing—may not be as promising as it seems. A video by the George Lucas Educational Foundation shows middle school students comparing two magazine photos in light of gender roles; other students filming a poetry project; third-graders watching a nature film and learning how the film was made; fourth-graders making animated short videos; seventh-graders analyzing newspaper photos of the war in Iraq; and other lessons and activities. These examples are supposed to show what students *should* be doing in class: discussing important issues, analyzing the information around them, and creating things. Near the end of the video, the narrator comments: “As courses and projects featuring elements of media literacy find

their way into more and more classrooms, writing English might become just one of several forms of expression, along with graphics, cinema, and music, to be taught in a basic course called communication.”⁸ This is where the losses begin.

First of all, with such a diffuse curriculum, students lose the opportunity to master the fundamentals of any subject. Students are supposed to jump into “big issues” (for which they may have no preparation) and to express themselves through numerous media before they are fluent in any. How can students learn the basics, not to mention the more complex ideas, when they are spread so thin? There have been similar efforts over the past century to generalize and expand subjects beyond their disciplinary base—for instance, by replacing history with social studies—and the drawbacks have been similar: students end up writing about their own communities, reading charts and graphs in a superficial

making music, and studying important historical issues. We are the only leading industrialized nation that considers the mastery of basic skills to be the goal of K–12 education.” That’s the conclusion drawn by education historian Diane Ravitch and AFT secretary-treasurer Antonia Cortese in *Why We’re Behind: What Top Nations Teach Their Students But We Don’t*, a recent report published by Common Core.

Mastery of basic skills is the beginning of an education, not its end. On that, at least, virtually all in the education field can agree. But what to do about it is a much more controversial topic. The big debate—in which Common Core is a vocal participant—is about the best means for students to acquire higher-order skills like creativity and critical thinking.

Cognitive scientists have already provided much of the answer: thinking, problem solving, and other higher-order skills are only possible when one has relevant knowledge. So we may talk about skills and content as if they were separate things, but in reality they are inextricably intertwined. Unfortunately, critical thinking can’t be strengthened by working on a math game and then used to analyze a historical document. To solve a thermodynamics problem, students must study thermodynamics. To analyze historical documents about the Civil War, students must study the Civil War. Even having analyzed documents about the Revolutionary War will only help a little bit: if students don’t know the people, places, events, and context of the Civil War, they won’t be able to analyze documents from that war.

So skills are important, but what skills our young people acquire depends on the content they have studied. This got us

wondering: what do students in high-performing countries study? *Why We’re Behind* attempts to answer that question by examining countries that outperform us on the international assessment PISA (Programme for International Student Assessment). Each of the nine countries we looked at (Australia, Canada, Finland, Hong Kong, Japan, Netherlands, New Zealand, South Korea, and Switzerland) provides its students with a content-driven, comprehensive education in all core subjects in which students develop higher-order skills as they complete sophisticated assignments.

To try to make the debate over 21st-century skills more concrete, we have selected several examples of content-rich education offered in these nations and contrasted them with lesson ideas from the “skills maps” on P21’s website. We think it is clear that these high-performing nations have found an effective approach for helping students become successful, well-educated citizens. But we didn’t stop there. Keeping the high-quality examples from around the world in mind, we pored over P21’s lesson ideas for suggestions of comparable quality. We found none we can enthusiastically endorse. But we did find a few that could provide “added value” to a student’s education if they were incorporated in a sequenced, content-rich curriculum. We hope P21 will use these examples as models to revise its current skills maps.

I. High-Performing Countries Have High Expectations

Science

New Zealand

In New Zealand, students in grades 7–8 learn to explain how the interaction between ecological factors and natural

selection leads to genetic changes within populations. They also investigate physical phenomena (in the areas of mechanics, electricity, electromagnetism, light and waves, and atomic and nuclear physics), and produce qualitative and quantitative explanations for a variety of complex situations.¹

Partnership for 21st Century Skills

P21 suggests that eighth-graders “view video samples from a variety of sources of people speaking about a science-related topic (e.g., news reporters, news interviews of science experts, video podcasts of college lectures, segments from public television documentaries, or student-made videos of parents and professionals in their community). Students rate the videos on the degree to which the person sounded scientific, then identify characteristics of speech pattern, word choice, level of detail, and other factors that influenced their perceptions. Students discuss ways that scientific communication differs from other forms of expression, and why those differences might be useful to scientists, then design a card game, board game, or video game that will help teach their peers some of the ‘rules’ of science communication that they’ve observed.”²

Analysis

While students in New Zealand learn central concepts of genetics and the physical sciences, and must think critically about complex theories like natural selection, P21 wants American students merely to recognize when someone has “sounded scientific.” Based on what? Not scientific knowledge, but visual and audible cues. P21’s sample lesson is devoid of specific content or educational purpose.

way, learning disconnected tidbits about cultures around the world, and knowing little history. To learn something well, we need focused study and practice. Survey courses are essential, but their topics should not be as broad and vague as “communication.” Filming a poetry project and analyzing war photos may be fruitful activities, but a communications course consisting of disjointed projects is unlikely to teach students how to communicate well. Such a course may offer, in the words of Robert Frost, “A little bit of everything, / A great deal of none.”

Second, in their efforts to make schools current, reformers neglect to offer the very stability that students need in order to make sense of the choices, clamor, and confusion of the present—

that is, to exercise critical thinking. If teachers must ceaselessly change their curriculum to match what is happening in society (or, more narrowly, the workplace), neither they nor their students will have the opportunity to step back and reflect. It is difficult to think about the workings of a roller coaster while on a roller coaster ride; it is difficult to analyze weather patterns while driving through a blizzard. Critical thinking requires perspective and a certain distance from one’s personal experiences. Schools need to offer a degree of stability and quiet—precisely so that students may grapple with important questions and teachers may carry out their responsibilities with integrity.

If we always must be up to date, then we are continually dis-

Indeed, what it teaches wouldn’t make students knowledgeable citizens. It is more likely to make them gullible consumers who could easily be duped by infomercials with actors who sound scientific. Whether a person sounds scientific is not important. What is important is whether what the person is saying is scientifically sound. A student can only make that judgment if he or she possesses the relevant scientific content knowledge.

Social Studies

Finland

Finnish students in grades 5–6 study the dawn of the modern era, specifically the “changes in the European’s values and conception of the world at the end of the Middle Ages: the Renaissance in art, the Reformation in religion, and science’s expansion of the conception of the world.” These young students also learn to “recognize the continuity of phenomena from one era to another and understand that change is not the same as progress, and does not mean the same thing from the perspectives of different people and groups.”³

Partnership for 21st Century Skills

One of P21’s proposed fourth-grade social studies lessons asks students to “work in small groups to discuss problems that they have observed or heard about in their school such as bullying or graffiti. Convening as a whole class, students should come to some common agreement about the problems that are most meaningful. After the problem has been selected by consensus, students take responsibility for specific elements of an inquiry into the causes of and possible solutions to the problem.”⁴

Analysis

The Finnish example allows students to develop analytical skills as they study historical examples of creativity, problem

solving, and innovation that are important for understanding Western civilization. The other does not. The lesson plan suggested by P21 is supposed to build social and cross-cultural skills. This is a worthy goal, but keeping our limited class time in mind, it ought to be pursued along with other worthy goals, such as enriching students’ understanding of the world. There are plenty of examples from history that would engage students in developing social and cross-cultural skills—why not use them? For example, why not have students study the cross-cultural challenges and opportunities created by the Silk Road?

Geography

Switzerland

In 12th grade, students are expected to know core topics in geography like the earth’s structure, climates, habitats, populations, and energy sources. For example, an exam for students who want to go to college includes several items on earthquakes, including “define the notion of magnitude,” “define the notion of intensity,” and “list four elements that influence the intensity of an earthquake.”

Students also must learn how geography intersects with other disciplines by studying topics like the “interdependence of economic spaces,” “migrations on a global scale,” and the historical, political, and economic influences on the “slicing and re-slicing of regions.”⁵

Partnership for 21st Century Skills

P21 recommends that 12th-graders “make an inventory of the way that geography content (landscapes, globes, maps, land uses, cultural depictions, etc.) are used as company logos, web sites, backdrops, screen savers, panoramas, etc. in the digital and print media and categorize them by media and content.” They are instructed to “assess the appropriateness of the geography content used as a backdrop relative to

the expectations (criteria) that people use for getting a person’s attention.”⁶

Analysis

How does studying a company logo deepen a student’s knowledge of geographic features or population growth or cultures? It doesn’t. It fails to give students even a glimpse of what the discipline of geography is all about. Meanwhile, Swiss students are developing their knowledge of, and ability to think critically about, topics that are central to the discipline and how they intersect with history, economics, politics, globalization, and integration.

English Language Arts

Canada

In Canada, a high school graduation exam in British Columbia provides students with passages from *Hamlet*, *The Tempest*, and *King Lear*. Students select one of the following prompts and spend roughly 25 minutes writing their responses:⁷

“Show the significance of this exchange between Hamlet and Gertrude. Refer both to this passage and to elsewhere in the play.”

“With reference both to this passage [from *The Tempest*] and to elsewhere in the play, show that this passage contributes to theme.”

“Discuss the parallels between the father-child relationship found both in these passages [from *King Lear*] and elsewhere in the play.”

Partnership for 21st Century Skills

Consider this example lesson for 12th-graders from P21’s website: “Students translate a piece of dialog from a Shakespearean play into a text message exchange and analyze the effect of the writing mode on the tone or meaning of the dialogue. Students then discuss audience and purpose in relation to communication media.”⁸

tracted and diverted. As soon as a school has caught up with the newest pedagogy and the technology that supports it, something newer comes along, making the newly acquired methods and machines seem dated once again. In the scramble to keep up, schools reflect the incoherence of the larger culture. They become susceptible to suggestions that what they are doing is not good enough, not current enough, not cutting-edge enough. Once, at a school where I taught, I heard a visiting administrator speak to science teachers about ways to boost student performance at the science fair. He told them never to have students use PowerPoint for the presentations. “PowerPoint sends up a

red flag,” he said. “It’s telling everyone that your school is still in the ’90s.” He recommended using Flash instead. He wasn’t concerned with the deficiencies (or strengths) of PowerPoint per se, but rather with its appearance and connotations. It would be unthinkable, presumably, for a student to submit a brilliant science report on paper. Substance defers to fashion in such a world view.

If we keep on chasing the newest thing, we will not only distract ourselves but repeat old mistakes. Educator, historian, and philosopher Isaac Leon Kandel criticized this tendency in 1943, noting in *The Cult of Uncertainty* that too many educators and education

Analysis

Canadian students could not successfully answer the exam questions posed if they had not read, analyzed, and discussed several of Shakespeare’s plays well in advance of the test. While we are pleased that P21 does reference Shakespeare, the lesson it offers isn’t actually focused on the works themselves. The lesson simply uses Shakespeare as a vehicle to teach something else—text messaging. Any written work could be used. Worse, most students are texting constantly; they do not need practice. And isn’t it obvious that the effect on the tone will be to make it less formal and the effect on the meaning will be to make it less nuanced? Don’t we want our students to study Shakespeare in a more rigorous way?

II. P21 Can Do Better

The question of what content to teach is as old as the very idea of education. And it is indeed a question worth revisiting time and again, and worth putting hard thought into the best means by which to teach that content. With that in mind, here are three eighth-grade lesson suggestions from P21 that could in fact be worthy of classroom time (a much more precious resource than many reformers realize). What makes these examples stand out from the rest of P21’s lesson ideas is that they suggest interesting ways to go deeper into core academic subjects. Appropriately embedded in a unit and in a larger, content-rich curriculum, they have the potential to extend students’ content knowledge while also developing their higher-order skills.

Science

“Students research how the physical and chemical properties of different natural and human-designed materials affect their decomposition under various conditions. They compare their findings to the



material evidence used by scientists to reconstruct the lives of past cultures, as well as create a map of their classroom as a future archeological site (including written descriptions of artifacts) discovered by scientists.”⁹

Social Studies

“Working in teams of two to four, students explore the impacts and effects of an invention or technological innovation of the 19th century and create a position paper that analyzes the pros and cons of the invention (e.g., impact of the cotton gin on Southern plantations and slavery).”¹⁰

Geography

“Students use digital population data for the United States to analyze the population distribution of the country in 1860 and 1870, copy and paste the data and organize it using a spreadsheet, rank the states from highest to lowest in population, develop quartiles (group states on population size into quarters), color code the quartiles on maps for each year, and use the maps to write a narrative describ-

ing the changes in population distribution before and after the Civil War.”¹¹

We recognize that P21 (and its corporate backers) wants to improve students’ skills. But P21’s current approach will not work because students will not acquire skills if they are not also developing their base of knowledge. And almost nothing in P21’s current program addresses that need. The potentially useful examples we found among P21’s lesson suggestions were few and far between. Ultimately, the problem is that P21’s program is not aligned to any worthwhile content. We hope that anyone interested in improving student learning will take a careful look at *Why We’re Behind* and the sophisticated ways that the world’s top-performing nations provide students with a comprehensive, content-rich education that enables them to build both knowledge and skills. □

Endnotes

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