Report from Hechinger Institute Explores Academic Rigor in Schools

As elected officials and educators increasingly call for more academic “rigor” in classrooms, the Hechinger Institute on Education and the Media releases the first report of its kind on the meaning of rigor for American students, teachers and schools

NEW YORK – President Barack Obama, Education Secretary Arne Duncan and dozens of governors insist that American schools need greater academic rigor for the U.S. to regain its global edge. But even the most ardent advocates of this concept don’t always agree on what it means. That’s why the Hechinger Institute on Education and the Media is releasing a groundbreaking and comprehensive report – intended to guide journalists and policymakers – that explores the intellectual and political roots of this concept and how it plays out in classrooms across the country.

“Rigor is one of those feel-good buzz words in education that, when you stop and think about it, has no obvious meaning,” said Richard Lee Colvin, director of the Institute. “This publication raises questions that will help journalists and legislators think more deeply about what academic rigor might look like so that they are better equipped to explain it to their news audiences or constituents.”

The publication, which was supported by the Bill & Melinda Gates Foundation, includes a piece on rigor in Europe and Asia, definitions of “academic rigor” from educational leaders as well as Governors Tim Pawlenty (R-MN) and Jennifer Granholm (D-MI), and an interview with two cognitive scientists who detail how the brain responds to rigorous lessons. Cognitive scientist Julie Fiez explains the advantages and disadvantages of rigorous learning:

Generally speaking, ‘demanding’ is good because it recruits the high-level frontal areas that we most associate with intelligence, creative problem-solving, executive control, deep reflection and so forth. The questions of when and how you want students to do hard things depend upon your ultimate goals. For instance, calculating matrices by hand might give students a different concrete understanding of mathematical knowledge and principles than what they would get from using a calculator. This in turn might be very important for ensuring their use of this knowledge is grounded in a deep understanding of the numbers and their transformations, not just how to program a calculator or computer to spit out a solution. Going ‘full throttle’ at all times is not necessarily desirable: There are benefits to building fluency by repeated practice. Students may lose their motivation to learn if they are always experiencing failure. There are also time limits on our ability to sustain high degrees of cognitive effort without taking a break.
The 28-page report also features a look at rigor in vocational education, as well as the perspectives of acclaimed high school English teacher Phil Holmes and the Los Angeles Times reporter who wrote about his rigorous lessons. Holmes says, “When a high school principal brags that his school offers a rigorous education, a journalist should ask what public evidence supports his claim. What is his school’s median verbal score on the state test? Don’t let the principal get away with answering the question with a complaint that the exams do not tell the whole story. Tell him that if he cannot point to steady improvement in his school’s median verbal score over three or four years, nobody will believe his claim that his school offers ‘a rigorous education.’”

The long-standing debate over whether knowledge or skills is more important also is addressed in the report. Former high school teacher Justin Snider, in an article about curricular rigor in the Advanced Placement and International Baccalaureate programs, writes: “the ‘content vs. critical thinking’ debate is a false dichotomy. The two sides should be seen as complementary, not mutually exclusive. And the debate is largely irrelevant in most high school classes, which offer a thin intellectual gruel that neither asks students to learn much content nor to think about what they do learn.”

Education reporters will be able to further explore issues related to academic rigor by consulting a list of relevant reports, contact information for experts, story ideas and suggested questions to ask that are included in the publication.

Individual copies of the report can be requested from the Institute by sending an email to hechinger@tc.edu. The entire report can also be downloaded from the Institute’s web site at www.tc.columbia.edu/hechinger.

Other Views

Tim Pawlenty, Governor of Minnesota:
“As each state and the nation compete in the global economy, we need to ensure that our children are held to high education standards. Academic rigor is an important part of providing the next generation with the knowledge and skills necessary to succeed in postsecondary opportunities and their careers. Academic rigor includes requiring students to take specific and tough courses. For example, in Minnesota we have enhanced our K–12 standards to require Algebra 1 by eighth grade and Algebra 2, biology, and either chemistry or physics to graduate from high school. It also means that students are exposed to comprehensive programs such as Advanced Placement classes. Through our ‘Get Ready, Get Credit’ initiative, Minnesota high school students can take up to six AP or College Level-Examination Program tests free of charge. Academic rigor means raising the bar and expecting more from our students, educators and policymakers.”

William Schmidt, professor of education at Michigan State University:
“A curriculum that exemplifies academic rigor is focused, coherent, and appropriately challenging. In the case of mathematics, such a curriculum focuses on a small number of topics at each grade to promote in-depth/mastery learning and sequences topics across grades in a coherent manner, reflecting the logic and structure of the academic discipline. Finally, such a curriculum is appropriately challenging from a cognitive or intellectual perspective in that topics are not excessively repeated but move students into an ever deeper and broader exposure to the discipline moving from basic concepts (e.g., meaning and operation of whole numbers) to more developed ones (e.g., the rational number system and its properties).”
Randi Weingarten, President of the American Federation of Teachers:
“First and importantly, academic rigor is not about teaching children to correctly fill in bubbles on a test, but challenging them to think outside of the box. It’s about giving students a robust, solid and high-quality education through rich curriculum that pushes them to realize their full, God-given potential. Students should be engaged in all elements of a well-rounded education: the arts and physical fitness, knowing about different people and places, thinking critically and arguing logically, and appreciating the value of active citizenship. For the adults – educators, parents, policymakers and the community at large – academic rigor means working collaboratively and taking shared responsibility to provide every child an opportunity to succeed in life.”

Susan Fuhrman, President of Teachers College, Columbia University:
“Since the 1980s, states have sought ‘academic rigor’ by aligning textbook content, teacher knowledge and resource allocation with learning standards for students from pre-kindergarten to 12th grade. The learning standards are typically the weak link – laundry lists of information created without understanding of what kids are ready to learn at a given stage of development. Now, there is a strong argument for developing curricula aligned with standards, assessments and teacher development that specify sequences of learning and provide much more guidance than standards. ‘Learning progressions’ – subject matter organized according to learning and developmental theory about how kids understand increasingly complex concepts – locate students on a spectrum of understanding and development; facilitate assessments that are diagnostic; and shape truly personalized teaching. We have a long way to go, and such progressions may not be specifiable in all domains, but I think this approach gets us to true academic rigor.”

Deborah Meier, noted teacher, writer and public education advocate:
“Educationese grows more and more Orwellian. ‘Reform’ now means anything that unions and teachers find offensive, and ‘academic rigor’ means anything that kids do. All the dictionary definitions of rigor – inflexible, harsh, stern – seem exactly the wrong habits for educating for 21st century work skills or in the habits of mind of a democratic citizenry. Getting to the bottom of things, healthy skepticism, intellectual patience, empathy, and respect for knowledge and expertise are more to the point. The best way to start tackling such a daunting task? I’d start by fostering them around children’s natural interests – uncovering, unpeeling their naïve notions about the world – until it becomes an unforgettable habit in the lifetime of learning that schooling introduces us to.”

The Hechinger Institute on Education and the Media, named for former New York Times education editor Fred Hechinger, is part of Teachers College, Columbia University. Its mission is to inform the public about education through quality journalism.

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