

MESSAGE FROM THE DIRECTOR

In the last three months SSI has seen a number of changes, additions, and beginnings. South Dakota, one of four new states to join the network in November, held the kickoff event for its State Scholars program in January; New Hampshire, another new SSI state, held its launch in February. The SSI Website has been redesigned, with the new site (www.wiche.edu/statescholars) debuting last month. In addition, we recently published the first of two policy briefs, called "Why Physics?" The brief focuses on the importance of physics to high school students, whether they go to college or start a career after graduation (it's available on our Website). It was reviewed by Nobel Prize-winning physicist Leon Lederman, whom we're thrilled to welcome to the SSI Advisory Board. As for the future, SSI has a number of projects in the works, including a DVD, designed for presentation to 8th graders, and an upcoming Webcast.



Terese Rainwater

SSI Profile: Nobel Prize Winner Leon Lederman

Leon Lederman, winner of the 1988 Nobel Prize in Physics, joined the SSI Advisory Board in February and has already lent his expertise to the initiative. SSI is extremely fortunate to have the assistance of a scientist whose professional experience is both deep and broad and whose actions throughout his career attest to his passion for education.

Lederman's personal experience and the perspective it has given him are equally valuable to SSI and its students. Born in 1922 in New York City, the child of parents who emigrated from the Soviet Union, he was the first in his family to go to college. Though his parents had little in the way of formal education, "learning was revered" in his house, Lederman says. He attended the neighborhood high school, where one of his role models was a chemistry lab assistant who worked during the day and went to college at night. Lederman studied chemistry at the City College of

New York and went into the Army after graduation. Three years later he enrolled at Columbia University to study physics and stayed there to teach for 28 years after receiving his Ph.D.

Lederman came of age in the heyday of particle physics – in 1951, the year he was awarded his Ph.D., Columbia University was building the world's largest particle accelerator, which allowed physicists like him to look at subatomic particles. He was awarded the Nobel Prize for his work on neutrinos, elementary particles whose speed and lack of electrical charge made them extremely difficult to detect and study. Lederman, along with physicists Melvin Schwartz and Jack Steinberger, were the first to show that more than one kind of

neutrino existed. He was also the director of the Nevis Labs and the Fermi National Accelerator Laboratory, where he oversaw the construction of the first superconducting synchrotron, the highest energy accelerator in the world. More recently, Lederman has delved into science education: kids, he says, "are born scientists."

"A well-taught physics course is foundational. As it unfolds, the observational processes and the beauty of the all-encompassing ideas expose the student to the power and passion of learning and show them that science is much more than what is in most textbooks. It is full of stories of humans engaged in trying to understand the world in which we live."

– Nobel Prize Winner Leon Lederman

FOCUS ON

★ KENTUCKY SCHOLARS

Kentucky Scholars is administered by the Partnership for Successful Schools, a nonprofit, nonpartisan organization founded 12 years ago by the CEOs of Ashland Inc., Humana, and UPS as a means of engaging business support for education reform efforts. Kentucky was in the first round of states to receive federal funding for its Scholars initiative. The program was launched in five school districts in 2004 – in Daviess, Jessamine, Kenton, Fayette, and Pike counties.

Kenton County, in northern Kentucky, took the Scholars ball and ran with it. A “parent-student” agreement outlines the commitments expected of each during a school year. Signed by the principal, the agreement requires parents to attend a presentation that includes information on the initiative before student schedules

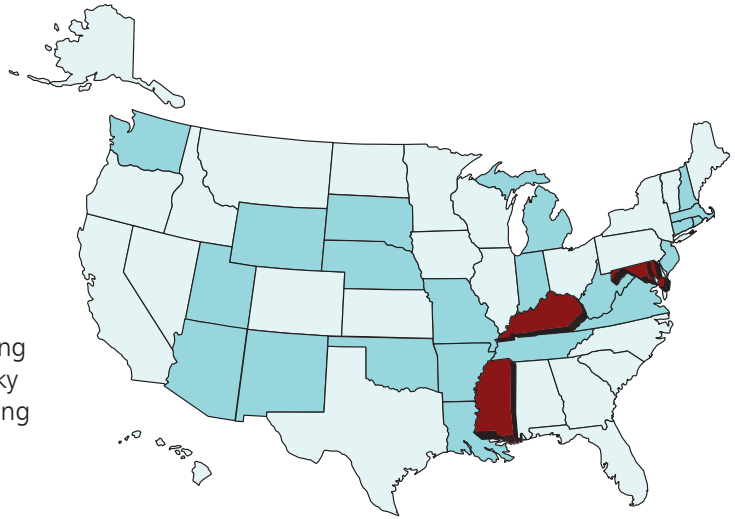
“The role of the business partner, in my opinion, is to give the students something to run towards.... What the business partner can demonstrate is that through hard work, you will have many more options in life. As I always tell the students, ‘He or she who is willing to do what others aren’t, wins!’”

– Pat Roberson
attorney and lead trainer for the
Kenton County Scholars Program

are released, ensuring that students and parents have a clear understanding of the program and of what students need to do to prepare for success in college and the workplace today.

Since its launch, the Kentucky Scholars Initiative has grown rapidly. Over 20,000 middle and high school students have seen SSI presentations, and the program will move into its 17th school district this year. More than 200 business volunteers participate at any given time, offering presentations, sponsoring awards and recognition events, and providing encouragement to students on their way to becoming Kentucky Scholars.

The initiative has also had an impact beyond its participating school districts. More rigorous graduation requirements were recently passed for all Kentucky students. Beginning in 2012, all students will be required to take a set of courses that mirror the Kentucky Scholars Course of Study, with some minor exceptions. Another example of the program’s impact is a movement to begin rewarding Kentucky Excellence in Education Scholarship money based on the rigor of classes students take rather than on grades alone. In



addition, a partnership with the Kentucky Department of Education in which 10 districts were invited to join the initiative by the state’s education commissioner is helping to spread the word about the program. Lastly, the Partnership for Successful Schools has received a grant to steer statewide research on rigor and relevance; the end product will be a system for evaluating and determining what a rigorous course looks like and how to implement it.

★ MARYLAND SCHOLARS

Maryland was one of the first states to participate in the State Scholars Initiative, launching the Maryland Scholars program in 2003 in two school districts – in Frederick and Harford counties. The Maryland Business Roundtable for Education (MBRT) leads the initiative, in partnership with the governor and the state superintendent of schools. MBRT funded a statewide expansion of Maryland Scholars after the original SSI grant was exhausted in 2005, and today, the program reaches all 24 school districts in Maryland. Some 2,500 volunteers have participated, reaching 83,000 Maryland 8th and 9th graders in more than 200 schools. Last June nearly 1,900 Frederick County graduates received a Maryland Scholars certificate at commencement exercises for having met the course-completion criteria – they represented 65 percent of Frederick’s senior class.

MBRT has collected three years of course-completion data from its two pilot

“We’re thrilled at the early results of the Maryland Scholars program, especially in the area of challenging those ‘mid-range’ students – the ones who might not otherwise have attempted higher level courses – to stretch themselves and tap into their potential. It’s working.”

– Jacqueline C. Haas
Harford County superintendent of schools

districts, which show significant increases in completion of rigorous coursework – particularly among low-income and minority students. (It also has two years of data from another four districts and baseline data from an additional seven districts, which along with the pilot data represents 115,000 students and 54 percent of Maryland’s school districts.) MBRT found that in Frederick and Harford counties between 2003 and 2005:

- 741 more students completed algebra I by 9th grade (a 19 percent increase).
- The number of African American and low-income students completing algebra I by 9th grade increased by 60 percent (162 more students) and 80 percent (184 students), respectively.
- 596 more students completed algebra II (a 15 percent increase).
- The number of low-income and Hispanic students completing algebra II increased by 58 percent (124 more students) and 89 percent (71 more students), respectively.

As a result of these compelling, outcome-based results, MBRT was invited to present testimony to the Congressional Subcommittee on U.S. Math and Science Competitiveness in 2005.

To coordinate the logistics involved in training, scheduling, managing, and communicating with its 2,500 volunteers, MBRT developed an online volunteer-management system and a virtual-training module for veteran speakers with the assistance of Lockheed Martin and Northrop Grumman. To sustain the dialogue with teens and provide them with a wealth of information about careers, colleges, and what they need to do now to prepare, MBRT produces a “Be What I Want To Be” magazine, along with an interactive website (www.BeWhatIWantToBe.com), funded by many companies and organizations.

To strengthen the program, MBRT is working with several universities, evaluating changes in student perception and action, as well as practices and barriers that impact rigorous course completion. MBRT is also strengthening adult support for students by launching a communications campaign that will provide information and strategies to school counselors, teachers, parents, and other adults who influence teens. In addition, it’s working closely with the Maryland State Department of Education to ensure that the Maryland Scholars designation appears on the newly designed statewide transcript and that every Maryland Scholar completer is recognized.

★ MISSISSIPPI SCHOLARS

The Mississippi Scholars Initiative is managed by the Public Education Forum of Mississippi. The program was launched in Mississippi in 2003 with two pilot districts: Hattiesburg, an urban school district in south Mississippi, and Indianola, a rural school district in the Delta.

Today, there are Mississippi Scholars programs in 37 school districts across the state and at 59 high schools and 51 middle schools. Over 200 local businesses are involved in Mississippi Scholars, and in the 2005-06 school year, volunteers made presentations to more than 21,000 students. Last year, nearly 1,700 students were recognized for completing the Mississippi Scholars Course of Study.

“Last year in August, the Mississippi Economic Council hit the road with a Trailblazer Tour. More than 2,800 people in 26 cities, including business, community, and education leaders, participated in the events, focusing on ways to improve education and workforce training in Mississippi. The tour gave Mississippi Scholars a tremendous opportunity to share their success stories as a testament to the positive effects of the Mississippi Scholars program. It is critical that students strive to achieve at higher levels in high school and graduate with the skills they need to compete in the workforce.”

– Blake Wilson
president, Mississippi Economic Council

In Brookhaven-Lincoln County, enthusiasm for Mississippi Scholars is running high. Last year, some 1,200 students in eight schools saw the Scholars presentation. In addition, the first Mississippi Scholars graduates numbered 29. The community held a Scholars appreciation dinner for students and their parents and awarded \$500 scholarships to eight of them. Currently, approximately 150 students are on target to graduate as Mississippi Scholars in 2007. “Our community embraced the Mississippi Scholars program,” says Kenny Goza, Brookhaven-Lincoln County Mississippi Scholars chairman. “We deemed this past year a huge success.”

Student Voices “The Mississippi Scholars program inspires high school students to develop plans for their lives after graduation.... As students, we were able to visualize the difference an education can make in the average salary of a person with a higher education. Honestly, I did not realize how much difference a college education makes in salaries.”

– Anna Hodges
Mississippi Scholar and student at South Pike High



SSI Kicks Off in South Dakota

The South Dakota State Scholars program had its kickoff on January 10 in the state capital, Pierre. South Dakota Board of Regents Executive Director Tad Perry and Regent James Hansen (both commissioners with the Western Interstate Commission for Higher Education, which manages SSI) were in attendance, as was South Dakota Secretary of Education Rick Melmer. The South Dakota State Scholars' four pilot schools are Wagner High School, Sturgis High School, Vermillion High School, and Sisseton High School (all four schools take the names of their towns). Presenters from Sturgis High and Vermillion High talked about their schools' career diploma (Sturgis) and career-cluster counseling model (Vermillion) and discussed how these initiatives will fit into the Scholars effort.



The entire group met again in Chamberlain, South Dakota, on February 8 to discuss Scholars graduation requirements and decided to follow the advanced-diploma program recommended by the South Dakota State Board of Education. The group also agreed that the students receiving the diploma (whose requirements

Pictured from left top row: Rich Deaver, state director; James Hansen, regent and WICHE commissioner; Coleen Keffeler, Sturgis; Jeff Simmons, Sturgis; Gary Evjen, Sisseton; Colleen Campbell, Sisseton; Stephen Schulte, Sisseton, Dave Koupal, Wagner.
Bottom row: Joanne Ustad, Vermillion; Dana Sanderson, Wagner; Steve Petry, Wagner; Curt Cameron, Vermillion.

mirror those of SSI) should also complete at least four courses that support their career-cluster interest area; one or more of these courses could include internship experiences. The group placed a heavy emphasis on changing the culture in their communities, with everyone endorsing the idea that all students should plan on further career training after high school.

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SSI is administered by the Western Interstate Commission for Higher Education (WICHE), based in Boulder, CO, and funded by the U.S. Department of Education under the Carl D. Perkins Vocational and Technical Education Act of 1998. Currently funded at \$6.6 million, SSI is also supported with an in-kind contribution from WICHE. The work reported herein was supported under State Scholars Initiative, PR/Award Number (V051U050006), as administered by the Office of Vocational and Adult Education, U.S. Department of Education. However, the contents do not necessarily represent the positions or policies of the Office of Vocational and Adult Education or the U.S. Department of Education, and you should not assume endorsement by the Federal Government.

STATE SCHOLARS: PARTICIPATING STATES AND CONTACTS

- ★ **ARIZONA**
www.azacademicscholars.org
- ★ **ARKANSAS**
www.arkansasscholars.org
- ★ **CONNECTICUT**
www.ctscholars.org/intro.htm
- ★ **INDIANA**
www.indianacore40scholars.org
- ★ **KENTUCKY**
www.kyscholars.com
- ★ **LOUISIANA**
<http://wiche.edu/statescholars/states/brief.asp?id=7>
- ★ **MARYLAND**
www.mbrt.org/scholars/index.htm
- ★ **MASSACHUSETTS**
www.mastatescholars.org
- ★ **MICHIGAN**
<http://michiganscholars.org/index.htm>
- ★ **MISSISSIPPI**
www.mississippischolars.org/mx/hm.asp?id=home
- ★ **MISSOURI**
www.wiche.edu/statescholars
- ★ **NEBRASKA**
www.futureforcenebraska.org
- ★ **NEW HAMPSHIRE**
www.wiche.edu/statescholars
- ★ **NEW JERSEY**
www.wiche.edu/statescholars
- ★ **NEW MEXICO**
<http://nmscholars.org>
- ★ **OKLAHOMA**
www.obecinfo.com/oklahoma_scholars.html
- ★ **RHODE ISLAND**
www.edpartnership.org/?id=1074
- ★ **SOUTH DAKOTA**
www.wiche.edu/statescholars
- ★ **TENNESSEE**
www.tennesseescholars.org
- ★ **UTAH**
www.utahsbr.edu
- ★ **VIRGINIA**
www.vacareereducationfoundation.org
- ★ **WASHINGTON**
www.partnership4learning.org
- ★ **WEST VIRGINIA**
www.educationalalliance.org
- ★ **WYOMING**
www.wiche.edu/statescholars

Policy Update

Graduation Requirements vs. “Default” Curriculum: What’s the Difference?

Since the release of *A Nation at Risk* in 1983, educators and policymakers have wrestled with how to increase both the rigor and the quality of high school coursework.¹ Nevertheless, over 20 years later data show that more than half of all high school graduates take at least one remedial math or reading course in college. In addition, most college students do not complete a degree. According to the American Diploma Project’s report *Ready or Not: Creating a High School Diploma that Counts*, “Many factors influence this attrition, but the preparation students receive in high school is the greatest predictor of bachelor’s degree attainment – more so than family income or race.”²

In the last few years, policymakers at both the state and federal level have responded with action and ideas. In 2005 the National Governors Association (NGA) hosted the National Education Summit on High Schools, which sought to address the quality of high school education. In addition, just this January, U.S. Department of Education (ED) and Education Secretary Margaret Spellings released “Building on Results: A Blueprint for Strengthening the No Child Left Behind Act,” which includes an emphasis on preparing high school students for college and careers.³ Both the NGA and ED stress the critical importance of closing the achievement gap by providing rigorous and advanced coursework for students.

The national attention being given to high school reform has encouraged many states to increase academic rigor in high school. There are two primary ways states are tackling this task: by changing state graduation requirements and by legislating a “default curriculum” for all students.⁴ These are two distinct tactics, and yet the difference between high school graduation requirements and a default curriculum is not always clear.

Graduation requirements. State high school graduation requirements are characterized by several factors: they posit a minimum course of

study; they offer multiple options that a student can pursue; and they do not require parental or student consent to participate in the most basic course of study. In recent years, 18 states have developed or increased the graduation requirements for their standard diploma, effective for graduating classes between 2006 and 2011.⁵

Table 1. States That Have Increased Diploma Requirements

District of Columbia	2008
Florida	2011
Illinois	2010
Iowa	2011
Kansas	2009
Louisiana*	2008
Maine	2010
Minnesota	2008
Mississippi*	2009
Missouri*	2010
New Jersey*	2008
New Mexico*	2009
Oregon	2010
Rhode Island*	2008
Utah*	2011
Washington*	2008
West Virginia*	2009
Wyoming*	2006

* SSI states.

Source: Education Commission of the States, “High School Graduation Requirements (50-State),” last updated 18 August 2006, accessed 11 December 2006 at <<http://mb2.ecs.org/reports/Report.aspx?id=735>>.

States that have changed or increased high school graduation requirements may offer several different types of high school diplomas, which require different levels of academic rigor, ranging from basic to advanced coursework. In these states, there’s no uniform policy that requires all students to take the same courses. One problem with that is that the onus is on students to

select the appropriate level of rigor, one that will accommodate their college or career plans after high school.

Default curriculum. A default high school curriculum is a rigorous course of study designed to provide students with the necessary preparation to succeed in college, work, or the military. A default curriculum has four distinct features: it is a challenging course of study, not a minimum one; it is implemented statewide; it is provided to every student; and students, with the consent of their parents and in conjunction with notification to the school, may “opt out.” Eight states have passed a default high school curriculum.⁶ Of these eight states, six are SSI states: Arkansas, Indiana, Kentucky, Michigan, Oklahoma, and South Dakota.

In contrast to state graduation requirements, which put the responsibility for meeting them in the students’ hands, a default curriculum holds the school primarily responsible for providing a rigorous course of study to every student. All students are held to the same high level of expectations – though, as mentioned above, students who seek a different course of study can formally opt out by signing (with their parents) an agreement with the school.

Most of the statewide default curricula have been in existence for a short time, and little research evidence is available to demonstrate the impact of this policy reform. Nevertheless, default curricula

Table 2. States That Have Passed a Default High School Curriculum[†]

Arkansas*	2010
Delaware	2011
Indiana*	2011
Kentucky*	2012
Michigan*	2011
Oklahoma*	2010
South Dakota*	2010
Texas ^{††}	2008

* SSI states.

[†] In these eight states, this curriculum is required as a “default” and students who “opt out” participate in the lesser requirements prior to the effective date listed above.

^{††} Texas had additional new requirements passed in December 2006 for the class of 2011.

Source: Education Commission of the States, “College Ready Standards, 2006” accessed 11 December 2006 at <<http://mb2.ecs.org/reports/Report.aspx?id=743>>.

hold the promise that every student will be provided with the necessary preparation to succeed in college or work. While increasing graduation requirements is also a step in the right direction, it may not be a big enough step. As long as states focus on the *minimum* that students must do – rather than on creating a strong, solid curriculum – it is less likely that they will inspire students to prepare well for the next step in their lives, whether that’s going to college or starting a career.

Endnotes

1. National Commission on Excellence in Education, *A Nation at Risk* (Washington, D.C.: Department of Education, 1983), accessed on 12 February 2007 at <<http://www.ed.gov/pubs/NatAtRisk/>>.
2. American Diploma Project, *Ready or Not: Creating a High School Diploma that Counts* (Washington, D.C.: Achieve, 2004), 1.
3. Margaret Spellings, “Building on Results: A Blueprint for Strengthening the No Child Left Behind Act” (Washington, D.C.: Department of Education, January 2007), accessed on 12 February 2007 from <www.ed.gov/nclb/overview/intro/reauth/index.html>.
4. Education Commission of the States, “High School Graduation Requirements (50-State),” last updated 18 August 2006 accessed 11 December 2006 at <http://mb2.ecs.org/reports/Report.aspx?id=735>; Education Commission of the States, “College Ready Standards, 2006,” accessed 11 December 2006 at <http://mb2.ecs.org/reports/Report.aspx?id=743>.
5. Ibid.
6. Education Commission of the States, “College Ready Standards.”

