

**EDUCATION OVERSIGHT COMMITTEE**

**Agenda  
Monday, October 10, 2011  
1:00 p.m.  
433 Blatt Building**

- |      |  |                |   |
|------|--|----------------|---|
| I.   | Welcome and Introductions  | Mr. Robinson   |   |
| II.  | Approval of the Minutes of August 8, 2011  | Mr. Robinson   |   |
| III. | Key Constituencies   |                |   |
|      | A. Teach For America South Carolina<br>Josh Bell, Executive Director<br>Cynthia Wilson, Superintendent, Orangeburg 5 |                |   |
|      | B. Innovation Policy<br>Dr. Gerrita Postlewait, Chair, SC State Board of Education                                   |                |   |
| IV.  | Subcommittee Reports   |                |   |
|      | A. Academic Standards and Assessments  | No Report      | Neil C. Robinson, Jr.<br>CHAIR  |
|      | B. EIA and Improvement Mechanisms<br>Information: Budget Review Process  | Mr. Drew       | Barbara B. Hairfield<br>VICE CHAIR  |
|      | C. Public Awareness  | Mrs. Hairfield | Dennis Drew<br>Mike Fair  |
| V.   | Special Action Items:  |                |   |
|      | A. Report per Proviso 1.97.  | Mrs. Barton    | Nikki Haley   |
|      | B. EOC Objectives 2011-12  | Mrs. Barton    | R. Wesley Hayes, Jr.<br>Alex Martin   |
| VI.  | Adjournment  |                | Daniel B. Merck<br>Joseph H. Neal<br>J. Roland Smith<br>Ann Marie Taylor<br>John Warner<br>William R. Whitmire<br>David Whittemore<br>Mick Zais |

EDUCATION OVERSIGHT COMMITTEE  
Minutes of the Meeting  
August 8, 2011

Members present: Mr. Robinson, Mr. Drew, Senator Fair, Senator Hayes, Mr. Martin, Mr. Merck, Rep. Smith, Mrs. Taylor, Mr. Warner, Rep. Whitmire, and Mr. Whittemore

Invited Guests: Ms. Bosket, Mrs. Cauthen, Mrs. Marini, Mr. Bounds, Dr. Knight, Dr. Booker, Dr. Padilla, Dr. Allan, Dr. Klar, and Dr. Watson

EOC Staff: Dr. Andrews, Mrs. Barton, Ms. King and Ms. Graham

**I. Welcome and Introductions:**

Mr. Robinson welcomed members and guests to the meeting. He asked public attendees to introduce themselves. Mr. Robinson reminded the EOC that the objectives of the retreat are to continue efforts to improve reading proficiency of all students in South Carolina and to gather information and expertise to improve the number of effective instructional leaders in our districts and schools.

Mr. Robinson asked for approval of the minutes of June 13. Mr. Drew made a motion to approve the minutes as distributed; Mr. Martin seconded the motion. The minutes were approved.

Mr. Robinson recognized Mrs. Barton who provided the members with information on her background and experience. She then informed the members of the information contained in the retreat packet.

**II. Reporting Facts and Measuring Change**

Information: Report on PASS Reading, 2009 and 2010

Dr. Andrews discussed the results of a study that compared the PASS reading and Research of students who took the PASS Reading and Research test as third graders in 2009 and as fourth graders in 2010. For the matched sample of 51,773 students, changes in student performance were determined based on the PASS levels of student achievement -- Exemplary 2, Exemplary 1, Met, Not Met 2 and Not Met 1. The results showed that the mean difference between students' 2009 performance and 2010 performance for the matched sample was a decline of 0.24. Furthermore, while 51.1 percent of students had no change in their performance, 16.0 percent of students increased their performance by one or two levels while 32.1 percent declined by one or two levels.

Student achievement changes were *disaggregated* by several factors: (1) by students identified as gifted and talented; (2) by students with non-speech disabilities; (3) by the socioeconomic status of students as measured by the federal school lunch program; (4) by racial/ethnic identity of students; (5) by the mobility of students between schools in the same district and across districts; (6) by the absolute rating of the school that the students attended; and (7) by the improvement rating of the school attended by the child. The disaggregated results showed that similar declines in student performance occurred across all levels. The largest decline occurred with non-speech disabled students who had a -0.33 decline in performance.

Mr. Warner wanted to know if ethnicity or poverty had a greater statistical impact on student achievement. Mrs. Taylor reiterated her concern with the achievement of disabled students.

Ms. Bosket concurred with Mr. Warner about the importance of creating cultures of innovation to promote the spread of best practices and innovation in schools.

#### Information: Report on District and School Leadership

Mrs. Barton summarized national and regional initiatives aimed at increasing the number of instructional leaders in public schools. She discussed the work of The Wallace Foundation and its support of efforts by the Southern Regional Education Board (SREB) in the states of Alabama and Tennessee. She also discussed the work of the Georgia Leadership Institute for School Improvement at the University of Georgia, the Broad Superintendents Academy, and the Virginia School Turnaround Specialist Program at the University of Virginia. The common themes were: (1) a transition from the role of the superintendent or principal from one of administrative leader to instructional leader; (2) the importance of higher education in such reform efforts; and (3) the role of public and private financial support for such initiatives.

Members discussed the importance of strong leaders and the need to cultivate environments of innovation. Mr. Warner reiterated his concern that there are governance issues that impede or restrain leaders from cultivating environments of innovation.

### **III. Promoting Progress**

#### Current Programs provided by the South Carolina Department of Education

Mr. Mark Bounds, Deputy Superintendent of the Division of School Effectiveness at the South Carolina State Department of Education described the eight programs and initiatives underway to provide support, mentoring and professional development to principals in South Carolina – the Foundations in School Leadership program; the Assistant Principal Program for Leadership Excellence; the Developing Aspiring Principals Program; the Principal Induction Program/Principal Assessment Program; the School Leadership Executive Institute; the Institute for District Administrators; and the Tapping Executive Educators Program. Since Fiscal Year 2000-02, these programs have served 2,879 individuals. He described the model as being based upon the model used in the military, a continuum of services based upon levels of achievement and training.

The new leadership initiatives underway at the agency are: alternative principal certification; tiered principal certification; and the Program for Assisting, Developing and Evaluating Principal Performance (PADEPP). Mr. Bounds noted that the Department is still concerned with the distribution of educators in rural school districts and the need to relieve principals of non-instructional duties. The agency is also looking at initiatives to assist leaders in non-traditional settings including charter schools and Montessori schools. Currently the agency is looking at the development of a transformation leaders academy and implementation of an alternative certification program. Next year the agency will develop the SAMS Program that will train individuals in school administrative functions. Individuals who complete the SAMS program will then be able to be hired by principals to be responsible for many of the non-instructional responsibilities of a principal.

The members asked about the number of employees in the office who provide the services. Currently there are four individuals with plans to hire two additional staff. Mr. Bounds did say that this office meets three or four times annually with institutions of higher education.

Mr. Warner noted how one community in North Carolina merged the mission of the school with a mission to revitalize the community by creating a farmer's market. Framing the mission of the school helped engage the community as well as provide hands-on learning opportunities for students.

The EOC recessed for lunch at noon.

### Discussion with Two Superintendents

Dr. Rainey Knight, superintendent of the Darlington County School District and Dr. Russell Booker, superintendent of the Spartanburg 7 School District shared their insight into leading two very different districts. They noted their challenges and successes.

Dr. Knight noted that she hired the best teachers she could find for the classroom and principals who used good judgment. Student performance was the focus of all decisions made. Her very stable and patient board of trustees also was supportive of her instructional changes. Dr. Knight noted that “there are no excuses;” she is in the business of teaching children. She meets four times per year with principals. Accountability is a key component.

Dr. Booker commented that he is leading his district through a transformation. He has instituted a system whereby parents have choice in several programs including Montessori, International Baccalaureate (IB), arts-infused, and STEM schools. He has led efforts to close two schools in two years. He pursued and obtained grant funding to open an early learning center providing services from birth to age 5. The district hopes to get NAEYC accreditation. He also led the effort to institute a 9<sup>th</sup> grade academy this year to improve the district’s graduation rate.

Mr. Robinson asked if there were any governance issues restricting the performance of their districts. Dr. Booker commented that he is concerned that there is no longer a dialogue with the South Carolina Department of Education. Dr. Knight gave examples of decisions made by the agency that directly impact schools and their budgets but which were made without input from the superintendents.

Mr. Warner asked what type of accountability structures would better hold schools accountable. Dr. Booker recommended a system focused on growth. Dr. Knight agreed but noted that such a system should be aligned to the report card.

When asked if there was one thing that they would change about public education, both said that they would change the perception of public education. Dr. Booker shared with the EOC a document that the superintendents had drafted as a guide for public education. Both noted that they appreciated the efforts of the State Chamber in its SC Minds at Work campaign.

### Discussion with Institutions of Higher Learning

From Clemson University Dr. Mike Padilla, Director of the Eugene T. Moore School of Education and Associate Dean of Educational Collaborations, and Dr. Hans Klar, assistant professor in Education Leadership began the discussion. Dr. Padilla noted that the role of higher education is changing. Universities must be responsible for education change and provide research, evaluation and expertise as needed. Higher Education also has a responsibility to school district to provide staff and curriculum development to assist schools. Dr. Padilla noted that the Clemson University is ready and able to collaborate. In addition Dr. Larry Allen, Dean of the College of Health, Education and Human Development at Clemson University reflected on the significant changes that have occurred in higher education.

Dr. Klar then presented the preliminary findings of a study, SC Successful School Principals’ Project. This project is one of other endeavors in the United States as well as in sixteen other countries. Using data files from the release of the 2009 annual school report cards, researchers at Clemson used a multiple linear regression to identify schools doing significantly better when

compared to their counterparts. The schools were above 70% poverty index. Upon identifying the schools, the researcher followed up with school visits, interviews and surveys of principals, parents, teachers, assistant principals, community liaisons and even high school students. Based on the core leadership practices, the researchers found:

- An unrelenting belief that their students could learn;
- A system of goals and rewards;
- Strong yet positive accountability of teachers and students;
- Orderly clean schools with happy students;
- Individualized professional development opportunities for teachers;
- A “no excuses” style of leadership;
- A focus on issues helped leverage change such as implementation of a single gender program;
- A culture of collaboration;
- Community involvement;
- Focus on finding the right teachers for the classroom; and
- Instructional resources aligned with standards.

Dr. Lemuel Watson, Dean of the College of Education at the University of South Carolina discussed the importance of higher education in public education. He noted that teaching, research and service provided by higher education should be provided. He noted that a P-20 initiative is needed to connect data to instruction so that all children in South Carolina achieve. He emphasized the importance of the state having an innovative, creative, data system. Dr. Watson discussed current initiatives in Illinois. Before becoming principals in Illinois teachers must exhibit leadership potential. A person cannot self-select into a leadership program. Also they must participate in a year-long residency paid for by the state. Education is an applied field; field experience for principals is important.

Both Dr. Padilla and Dr. Watson mentioned the importance of value-added achievement because institutions must determine if their graduates are effective teachers and leaders. Collaboration and dialogue are needed between K-12 and higher education. Mrs. Taylor concurred that more partners are needed in education reform and improvement.

#### **IV. Participation on Other Governing Bodies**

- A. Information: Education and Economic Development Act - Mr. Martin reported that the Coordinating Council has been given one additional year to operate and continues to move forward in implementing the EEDA.
- B. Information: Statewide Charter School District – Mr. Drew had to leave the retreat at 3:10 p.m. Mrs. Barton reported for Mr. Drew that there are 44 charter schools operating this year in South Carolina with an enrollment of 15,967. With the reorganization of the Department of Education there are changes in personnel and administration of charter schools.
- C. South Carolina Public Charter School District -- Mr. Robinson indicated that Mr. Martin is the EOC’s nominee for the position on the SCPCSD board. This nomination and others are pending before Governor Haley.
- D. Governor’s School for the Arts and Humanities – Mr. Robinson noted that Mr. Warner is being appointed to the board of directors of the Governor’s School for the Arts and Humanities, taking the position vacated by Dr. Jo Anne Anderson.
- E. South Carolina Reading Achievement Systemic Initiative. -- Mr. Robinson announced that he is appointing Ann Marie Taylor to the reading panel.

**V. EOC Roles and Responsibilities**

- A. Action: Objectives for 2011-2012 – Mr. Robinson asked Mrs. Barton to draft the objectives, taking into consideration the discussions of the August 8 meeting and asking EOC members to provide input. The objectives will be discussed, amended and then approved by the full committee at its October meeting.
- B. The committee went into Executive Session to consider a personnel issue.

The veil was lifted from Executive Session. Mr. Robinson noted that the committee will discuss the hiring of a permanent Executive Director at a later date.

The meeting adjourned.

## South Carolina Board of Education

### Statement of Purpose – Encouraging Innovative Practice in SC Public Schools

On May 4 the Policy and Legislative Committee adopted, and the full board approved the following goal: *"The Policy and Legislative Committee will develop recommendations for encouraging and incentivizing innovative approaches to personalized learning, including, but not limited to more powerful uses of technology and competency-based learning."*

- A statement of purpose was drafted and shared with the Board at the April, June and August meetings.
- Contacts have been made with potential partners in this effort: selected education leaders in the state, The Riley Institute, SC Future Minds, the South Carolina Chamber of Commerce.

In August the South Carolina Board of Education unanimously adopted the following:

#### ***Statement of Purpose***

*The world has changed profoundly over the past four decades. The economy, the role of technology, and our nation's global role have all been transformed. Against this dynamic background, however, one institution has remained mainly unchanged: our elementary and secondary schools. Although there are many success stories emerging from public schools across the state and country, far too many students are disengaged, dropping out, ill prepared for jobs and civic responsibilities.*

*If we are to bring all students to a level of learning demanded by our economy and create real paths to opportunity, democratic participation, and social mobility, we must fundamentally rethink the way we structure and organize learning environments. True transformation means deepening the focus of learning to include skills such as critical thinking problem solving, creativity, autonomy, and collaboration while rigorously covering the core academic content. It means using the latest technology to customize learning so it matches individual student needs and interests. It means radically changing accessibility through online offerings and mobile apps so that where you live no longer determines the quality of the education you receive.*

*The South Carolina State Board of Education wishes to encourage and recognize districts and schools that are moving toward this new learning paradigm, shaping a new learning-centric, personalized system of education so that each individual--from early childhood through adolescence--is prepared for life, work, and citizenship in the 21st century.*

*As a board, we are focused first and foremost on results--on dramatically improved levels of learning, particularly among students who have not previously achieved at high levels. Based on emerging findings, it appears these factors, identified by the Council of Chief State School Officers as the "six attributes of next generation learning," are core design principles for transformation:*

1. ***World-class knowledge and skills***, which require achievement goals to sufficiently encompass the content knowledge and skills required for success in a globally-oriented world;
2. ***Performance-based [proficiency] learning***, which puts students at the center of the learning process by enabling the demonstration of mastery based on high, clear, and commonly-shared expectations;
3. ***Personalized learning***, which calls for a data-driven framework to set goals, assess progress, and ensure students receive the academic and developmental supports they need;
4. ***Anytime, everywhere opportunities***, which provide constructive learning experiences in all aspects of a child's life, through both the geographic and the Internet-connected community;
5. ***Authentic student agency***, which is the deep engagement of students in directing and owning their individual learning;
6. ***Comprehensive systems of learning supports***, which address social, emotional, physical, and cognitive development along a continuum of services to ensure the success of all students.

By Fall, 2011 the Policy and Legislative Committee of the South Carolina Board of Education, in concert with other entities who share our beliefs and goals, will develop a proposal to recognize and reward teachers, schools, or districts that have implemented innovative practices that: a) embody the attributes outlined above and b) result in high levels (evidence-based) of student success.

## A Time for Deeper Learning: Preparing Students for a Changing World

Our increasingly complex world demands much of its students. In almost every aspect of their lives, young people are being asked to learn more, process more, and produce more. These increasing demands mirror the world around them. Now more than ever, the nation's education system is being challenged by a technology-driven global economy that requires a skilled and deeply literate workforce.

In recent years, a national consensus has emerged around what should be the educational expectations for all students. Rigorous standards for college and career readiness developed by state leaders have now been adopted by forty-four states and the District of Columbia. State leaders have also formed two unique consortia that are designing a new generation of assessments to support these standards. This shared agreement among so many states to educate all students to the same high levels of achievement represents a major shift in the nation's attitude about public education.

Unfortunately, the nation's educational infrastructure is not currently designed to support this important shift in education goals. In order for all students to meet high standards of college and career readiness, young people will need to leave high school with deep content knowledge and the skills most prized in a changing world economy. To accomplish that, policy and practice at the federal, state, and local levels will need to support *deeper learning*, the knowledge and skills all students will need to succeed in college, career, and life.

This paper describes deeper learning, with regard to both its necessity and the growing body of global evidence supporting its wide-scale implementation. While providing a picture of what deeper learning might look like in classrooms, this brief also describes the policy changes necessary to ensure that all students have opportunities for the kind of learning needed in an increasingly complex world.

### **Deeper Learning: An Imperative For All Students**

Deeper learning is simply what highly effective educators have always provided: the delivery of rich core content to students in innovative ways that allow them to learn and then apply what they have learned. Rigorous core content is the heart of the learning process; true deeper learning is developing competencies that enable graduating high school students to be college and career ready and then make maximum use of their knowledge in life and work.

The basic concepts of deeper learning are not new to education; indeed, they are routine educational practice for many accomplished individual teachers and educators and some high-performing schools. These successful practices are now being confirmed by increasing bodies of evidence underscoring the necessity for deeper learning as an integral part of the educational process.

Deeper learning prepares students to

- know and master core academic content;
- think critically and solve complex problems;
- work collaboratively;
- communicate effectively; and
- be self-directed and able to incorporate feedback.

The evidence from international studies dramatically demonstrates that deeper learning produces high academic performance. The assessments, studies, and reports conducted by the Organisation of Economic Co-operation and Development (OECD), the leading international organization of the world's most-developed nations, provide thorough support for the effectiveness of deeper learning. The leading example comes from the results of the Programme for International Student Assessment (PISA), which every three years measures fifteen-year-olds' knowledge and their ability to apply that knowledge to real-world situations.

OECD's vision of PISA illustrates core deeper learning principles. As described by the OECD,

PISA assessments are designed not only to find out whether students have mastered a particular curriculum, but also whether they can apply the knowledge they have gained and the skills they have acquired to the new challenges of an increasingly industrialized world. Thus, the purpose of the assessments is to inform countries on the degree to which students are prepared for life.<sup>1</sup>

In this collaborative assessment effort by seventy countries, a main characteristic of the highest-performing nations, such as Shanghai–China, is that students regularly have opportunities to engage in deeper learning. As an OECD report accompanying the recent PISA results concludes,

[T]he inquiry-based curriculum component in Shanghai–China asks students, with support and guidance from teachers, to identify research topics based on their experiences, seeking to develop the capacity of students to learn to learn, think creatively and critically, participate in social life, and promote social welfare ... Teachers' performances are now also evaluated by the time given to student participation and how well student activities are organized.<sup>2</sup>

Unfortunately, PISA scores show U.S. students trailing behind students in other developed countries in the application of key subjects like reading, math and science.<sup>3</sup> The performance of underserved students in the United States on PISA exams is especially worrisome. There is a huge gap between the lowest and highest achievers on the PISA exams in reading, with fifteen-year-olds from families with lower socioeconomic status scoring about 20 percent lower than their peers from families with higher status.<sup>4</sup> These findings are especially troubling because other countries have demonstrated that socioeconomic status need not define educational opportunity. The correlation between socioeconomic status and PISA scores among U.S. students is more than twice that of the highest-performing systems, among them Finland, Hong Kong, and Canada.

PISA exams are some of the best available and most widely used tests of deeper learning. Looking at how students perform on PISA can tell us a great deal about how many students are truly engaging in the kind of work that experts feel is necessary to succeed in college and compete in the global workforce. An excellent example of that comes from another study by the OECD that followed 30,000 Canadian students for six years after they took the PISA exam in 2000. The study found that students



that scored at the top PISA level of reading proficiency (Level 5) were twenty times more likely to access university than those scoring at or below Level 1.<sup>5</sup>

To thrive in an increasingly complex and dynamic world, one must grasp the fundamentals of scientific inquiry and analytical thinking, know where to find reliable information, and be able to communicate and work with other people. David Conley, a leading thinker on postsecondary success, argues that success in post secondary education depends on a range of “key cognitive strategies” that are neither well taught nor well measured by existing practice and tests. These cognitive strategies include critical thinking and problem solving, as well as the ability to make reasoned arguments. These strategies are important not only in college but also in the workplace. Conley’s research is supported by surveys of both faculty members and leading business organizations that have identified critical thinking, problem solving, and communication and interpersonal skills—all competencies closely aligned to deeper learning—as the qualities necessary for college and career success.

A shift toward all students mastering the kind of advanced skills embodied in deeper learning comes at a time when many schools continue to struggle to teach even basic skills. National assessments show that many U.S. students are not achieving basic proficiency in the essential areas of reading, writing, math, and science. Some would argue that the nation’s schools need to focus on the “basic” and leave deeper learning for those schools that can afford to teach at that level. This argument is short sighted and will only weaken the nation’s ability to compete economically with its international counterparts.

One only has to visit a modern automobile production facility to see the value of deeper learning for all students. For almost a century, a line of workers performed the same repetitive task all day, every day—no depth of knowledge was required. Today’s modern production process requires line workers to have a much wider set of knowledge and skills. Teamwork, innovation, communication, and adaptability characterize today’s manufacturing facilities. Catherine Snow, the Patricia Albjerg Graham Professor of Education at Harvard states it well: “Fifty years ago kids who figured it out graduated, while others went to work at GM. Now we actually do have to teach everyone.”

## **Achieving Educational Equity ... One School at a Time**

While the economic data suggest that individuals will benefit from developing deeper learning abilities, the nation as a whole will only succeed if large numbers of individuals—particularly those from traditionally underserved groups—learn deeply. Making deeper learning opportunities more equitable is imperative from both a moral and an economic perspective.

The moral imperative is overriding. For years, U.S. schools have tended to offer a two-tiered curriculum, in which some students, primarily white and relatively affluent, have had opportunities for deeper learning, while others, primarily low-income and students of color, have focused almost exclusively on basic skills and knowledge. More-affluent and white students get to analyze works of literature and write extensively, while low-income and minority students tend to complete worksheets that focus on memorization.<sup>6</sup>

Many policymakers have long been rightly concerned about the large numbers of low-income and minority students who progress through the U.S. education system without being able to demonstrate that they have learned basic skills like reading or math computation. But just as these students have not mastered basic skills, neither do they have the skills embodied in deeper learning—the ability to know, think, and do. In today’s information age, equity now becomes economically vital as well. The nation’s



prosperity in the near future will depend more than ever on students from underserved groups. Minorities now account for about half of all births in the United States, and by 2050 the U.S. is expected to become “majority-minority”—that is, more than half the population will be made up of people of color, compared with 35 percent in 2010.<sup>7</sup> The U.S. economy can only thrive if the whole population, not less than half, is equipped to succeed.

The growing body of evidence on how students learn also creates an imperative to expand deeper learning. Hundreds of schools across the country are now incorporating deeper learning principles and many have shown promising educational results. These schools exist in both urban and rural areas and serve a range of student populations. Envision schools, New Tech Network, the Expeditionary Learning network, and the High Tech High Schools are some of the leading edge schools that have incorporated deeper learning practices into the daily life of students, teachers, and the community. Envision Schools, which operates four urban high schools in the San Francisco Bay area, educates predominantly disadvantaged students, the majority of whom are first generation college-bound. The graduation rates for Envisions students fly in the face of most college-going statistics; in 2008, 95 percent of Envision graduates were admitted and have stayed in college.

Envision’s founder Bob Lenz credits the “Graduate Vision”—all graduates must demonstrate the mastery of content, skills, and understandings learned through the completion of rigorous academic coursework and major projects—and the Deeper Learning Student Assessment System for much of the progress the schools have made with their students. The graduation vision and the assessment system that supports it ensures that a student not only has met the state’s minimum standards, but that he or she has demonstrated, through a body of evidence and multiple academic measures, a breadth of leadership and cognitive skills that are relevant for the twenty-first-century, technology based workplace.

To get a better sense of what deeper learning looks like, consider this mathematical problem solving application used by Envision Schools. *The Really Super Amazing Technical Dive* tells the story of a dedicated teacher, Ms. Lundin, who will perform a technical dive from a Ferris wheel into a tub of water to help her students learn. The problem involves three things: a Ferris wheel, a stopwatch, and a moving tub of water.

According to the problem, a platform that Ms. Lundin can stand on is attached to one of the Ferris wheels seats. There is also a tub of water on a moving cart that runs along a track passing underneath the Ferris wheel and platform. As the Ferris wheel turns, Ms. Lundin needs to jump at exactly the right time so that she will land safely in the tub of water and will not get injured in her attempt.

Unlike math problems that measure just basic skills and not application, students are asked not only to solve the problem and show the final equation, but they are asked to determine exactly when Ms. Lundin should jump (time) and from what height (distance) so she lands safely in the tub. To do this, the students must demonstrate a series of analytical steps:

- 1) Determine what information is needed to determine when and from what height Ms. Lundin should jump.
- 2) Create a model of the situation (physically and graphically).
- 3) Write out a problem statement that clearly explains the situation, the questions being asked, and show the model.



- 4) Give the final equation and explain the sub-equations used to solve it.
- 5) State a recommendation using evidence to convince Ms. Lundin of the findings, and include two problem-solving methods to verify the answer.
- 6) Reflect on the process. What worked? What other factors could have changed the answer?
- 7) Highlight concepts in the problem statement, answer, and reflection.

To complete this task, students must know the subject matter content—in this case, algebraic functions and physics. They must be able to think critically about all the variables and use their knowledge to formulate and solve a problem, just as they would in college and the workplace. They must be able to communicate effectively, to explain their solution using evidence, and, because the work is team-based, they must collaborate with their peers. Finally, the students must be able to reflect on their work and show that they have learned how to learn.

In order for both students and teachers to benefit from this kind of deeper, more comprehensive approach to solving a math problem, schools need supportive policies in place that align with this kind of educational approach. For example, schools that incorporate deeper learning principles provide both teachers and students time for collaboration; student performance is based on the mastery of both rigorous content and skills and measured by more than a simple multiple choice test; students have access to technology and resources that will help guide and inform their project work; and teachers are encouraged to create more complex problems that require students to utilize a variety of skills and content knowledge.

At New Tech High at Arsenal Tech in Indianapolis-- part of the New Tech Network -- the school day is organized into blocks that combine subject areas, such as history and English and astronomy and mathematics. The curriculum for each combined class is designed around a set of projects, with a heavy emphasis on technology, that enable students to meet state standards for each subject. Each project culminates in a public presentation, and students are graded not only on their content knowledge but also on their critical thinking, oral and written communications, and teamwork.

There are many more examples of schools around the country that have demonstrated the power and promise of deeper learning for all ranges of students. Many of these schools would like to reach even more students. Public school systems like the Long Beach Unified School District in Long Beach, California have also incorporated programs that emphasize deeper learning. The district implemented a math curriculum and professional development program called MAP<sup>2</sup>D that emphasizes student collaboration and communication. The district has seen Latino fifth graders improve from a rate of 15 percent proficiency in math to more than 60 percent over four years.<sup>8</sup>

## **Deeper Learning: The Road Ahead**

The good news is that momentum is growing for more schools to embrace the principles of deeper learning for all students. President Obama and the nation's business leaders have called for the kind of change in public school systems that would finally put in place for all students rigorous high standards that foster the kind of critical thinking, problem solving, and communication skills that are absolutely necessary for college and career readiness. There is a unique opportunity now that forty-four states and the District of Columbia have agreed to implement common standards for all students that are internationally benchmarked with those of the highest-performing nations in the world.



Similarly, next generation assessment systems that align to these high standards are also being developed. Building on the tests of deeper learning that have already been created, (such as PISA and the Collegiate Learning Assessment), these new assessments could have a tremendous impact on how students nationwide are assessed for college and career readiness. Additionally, new technology platforms are making possible learning opportunities unimaginable a decade ago. One of the most practical developments is educational technology that makes it easier for all teachers to collaborate, communicate, and share a common focus on student progress. Model curricula for all subjects is available on the Internet and communities of teachers and learners can use the Web's resources to organize learning communities as well as access a vast trove of resources to support traditional learning materials. Technology also helps promote greater equity among students by providing access to students who are isolated because of overwhelming poverty or being located in a remote area.

## **Policy Actions That Support Deeper Learning**

While individual schools and systems are successfully applying deeper learning and can demonstrate its effectiveness and practicality, bringing such experiences to scale for all students-especially those most underserved-is a formidable undertaking. Fortunately, the foundation for change has been well laid. Supportive policies, such as the adoption of standards that support college and career readiness and the development of next generation assessments, indicate that policymakers are starting to come together on what changes and investments are needed to achieve this important goal.

While much of federal education policy in the past decade has been focused on the important goals of ensuring that all students are proficient in the core subjects of reading and math, education leaders nationwide now agree that education policy at both the federal and state level needs to address the range of academics and skills needed for all students to be fully ready for college and careers. The upcoming reauthorization of the Elementary and Secondary Education Act (ESEA) presents a unique opportunity for federal policymakers to create opportunities for states and districts to put in place the kinds of policies and practices that a deeper learning environment requires.

### **Standards**

ESEA should reinforce the hard work already underway in states to better prepare students for the demands of college and a changing workforce and support the state-led movement toward standards for college and career readiness. Many current state standards focus on breadth of coverage and do not emphasize a depth and application of understanding. This patchwork of standards has created a climate of confusion and not proved effective in producing large numbers of students who can achieve at even sufficient levels in college and career. Existing language in current law could be amended to require that states adopt standards for college and career readiness that contain both rigorous academic content and the teaching of advanced skills such as critical thinking, communication, and the application of content knowledge. Current law encourages the teaching of advanced skills, but that provision has clearly not had the impact needed to ensure students are gaining these essential life skills. Because states and local districts have primary responsibility over education policy, ESEA should emphasize that states have the choice to determine their own standards for college and career readiness, provided they are peer reviewed and externally validated by representatives from higher education and the business community to indicate college and career readiness.



Current law could also be amended to require that standards not only describe three static levels of achievement—basic, proficient, advanced—but that they also describe growth and academic achievement toward the ultimate goal of college and career readiness and so that states can implement high-quality growth models if they choose to do so. Robust implementation of standards that recognize and emphasize the key principles of deeper learning would ensure more students leave high school with those skills researchers, policymakers, and the business community know are essential to success in college, career, and civic life.

## **Assessments**

As the majority of states transition to a shared set of standards for college and career readiness, there needs to be a set of assessments that schools can use to measure the full range of content and skills included in the standards. Most current state assessments that are used for ESEA accountability purposes do not actually measure the kinds of deeper learning skills and knowledge that are desired by colleges and business leaders. Tasks and questions that ask students to apply their knowledge to solve complex problems, work in teams, and effectively communicate their knowledge and analysis are completely overlooked by most current statewide, standardized assessments.

Rich assessments that measure the kinds of skills and knowledge most desired in the modern workforce can and should be aligned with the assessments used to ensure rigorous accountability. The deeper learning network of schools mentioned earlier in this paper demonstrate that it is possible to have teachers and leaders using high-level instructional practices with rigorous academic content, formative assessment, and high-quality summative assessments of student work. Unfortunately, the current status of ESEA makes it very difficult for more than a small number of schools to successfully strike that balance

The federal government has invested substantially in the development of next generation assessments by funding two unique consortia of states: SMARTER Balanced Assessment Consortium (SBAC) and Partnership for the Assessment of Readiness for College and Careers (PARCC). These two consortia were charged with developing assessments that measure the full range of college- and career-ready standards. The initial \$330 million investment made by the federal government is only one small step in the process of seeing these assessments fully developed and implemented. Currently, the federal government helps states cover the costs of developing and implementing assessments by providing funding through formula and competitive programs authorized in Title VI of ESEA. If all states are going to adopt high-quality, next generation assessment, the federal government will need to maintain its commitment to helping states meet these assessments costs through the Title VI program and by allowing states that wish to use federal funds to help pay for the ongoing development and implementation of the next generation assessments the flexibility to do so.

## **Accountability**

The foundation for deeper learning rests on the premise that all students will leave school with the ability to know and understand core content based on rigorous standards that teachers and leaders are held accountable for. To that end, ESEA should support an aligned assessment system that measures student growth and progress on standards for college and career readiness *and* that provides reliable measures of student progress for accountability purposes. Congress should also reform the federal accountability system to ensure that it uses more complete measures of student achievement.



Currently, states use statewide reading and math tests and graduation rates to calculate Adequate Yearly Progress (AYP) for secondary students. The majority of states have responded to this requirement by implementing low-quality standardized assessments. Because of the strong influence of tests on classroom practice, the curriculum and instruction choices that stem from this practice represent a major challenge to deeper learning. There is an opportunity now in federal law to encourage more schools and districts to move to a system of higher-level instruction and assessment. Accountability systems should include a range of essential skills that are being assessed. Congress should signal its support for statewide, district, and school accountability systems that are designed around new and more complete measures of student achievement that are rigorous, fair, valid, and reliable for all students, hold all students accountable to the same high standards, and are comparable across all school districts within a state or consortium of states.

### **Professional Development and Teaching Practice**

All teachers need to be capable of leading classrooms in which students have opportunities to engage in tasks and assignments that enable them to demonstrate the deep understanding of content and higher-level skills necessary for success after high school. Teachers need to develop these abilities before they start in the classroom and they must have opportunities to continually hone their skills throughout their careers.

Research shows clearly that clinical experience is essential for prospective teachers, but many preparation programs provide too few opportunities for teacher candidates to develop their craft alongside a skilled mentor. Federal and state policies can support improved preparation by directing resources to those programs—both university-based and alternative programs—that include substantial clinical experiences and that employ curricula that support deeper learning. The federal and state governments can also support the use of performance assessments for prospective teachers that show whether they can demonstrate the skills they need to be successful in the classroom, and hold all preparation programs accountable for the performance of their graduates in the classroom.

Federal and state governments could also direct resources for professional development toward efforts that are effective in improving instruction and deeper learning for students. Currently, professional development funds support a wide range of coursework, most of which is unrelated to developing teachers' ability to improve student learning. By targeting resources on effective practices—including enabling teachers to collaborate to develop and hone lessons—federal and state governments can support continual improvements in teaching and learning.

### **State-level Policies**

It is essential that changes in state-level policies are aligned with the larger federal issues described earlier. Key policy areas such as curriculum adoption, the use of technology, and advancement based on seat time will be important determinants in the success of deeper learning. For example, the rapid development and application of technology and the availability of Open Educational Resources (OER) content directly confronts the traditional views of how time and resources are used during the school day. Deeper learning often shifts school practice away from Carnegie units and other seat-time requirements towards a measure of student progress based on competency and application of knowledge. To accomplish that important goal, states and districts need to be able to allocate to both teachers and students the time they need to master college- and career-ready standards.



Although the federal government is restricted from influencing curriculum materials directly, about half the states have textbook-adoption policies that provide them with powerful control over the materials used in schools. These policies were adopted almost a century ago to offer a measure of quality control, but in some instances they have impeded innovation and restricted schools' flexibility in adopting materials that would deepen students' learning. At the same time, advances in technology have sharply reduced the need for conventional textbooks and the traditional means of adopting their content.

To take advantage of the opportunities technologies have opened up, states could provide greater flexibility to enable schools to use digital materials in classrooms. But digital materials are not just substitutes for textbooks. They offer new opportunities to expand learning by providing students with access to a wealth of content and connections to experts and peers around the world, as well as new learning experiences through simulations and other means. Moreover, students can learn using digital materials at any time, not just from 8:30 a.m. to 3:00 p.m. By providing students with access to digital learning, schools, districts, and states can enhance deeper learning.

Flexibility in the use of technology is not enough. As any Internet user knows, the sheer volume of materials available online is vast, and educators need guidance in selecting those that are effective and appropriate. States can play a role—similar to their role in textbook adoption—in evaluating digital resources, aligning them to standards, and providing at least a baseline for rich media materials for all teachers for all state standards. In addition, states can also remove restrictions that limit students' access to digital learning. States could also expand schools' access to broadband so that students can take advantage of the huge range of open educational resources and other materials available on the Internet.

## **Toward a Deeper Learning Experience for All**

The federal government and the states have undertaken an ambitious education policy agenda in a time of great economic uncertainty. During the next few years, policymakers face two major challenges—one consciously sought, the other externally imposed. The first is the shared desire among education policymakers to have higher educational standards that truly incorporate what students need to know and be able to do in today's global economy. The wide-scale adoption of standards for college- and career-readiness standards was a bold step that now requires an even greater commitment to implementation. Education leaders will need to be sure that the rigorous mix of knowledge and skills called for by employers and higher education are foremost in implementation in order to fully realize the promise of the standards.

The second and unsought challenge is the severe budget shortfall facing most states, forcing state leaders to undertake significant reforms with less revenue and in a climate of greater anxiety. During this critical period, policymakers at every level will be making critical decisions about how they spend their limited resources. Despite these challenges, it remains a unique moment for education policy. The highest levels of leadership at both the state and federal level are focused on the urgent need to realign the nation's education system to better prepare students for college, career and civic life. The policies and practices discussed in this paper support a focus on deeper learning, the kind of education that higher education experts, researchers, and business leaders agree is essential to achieve that goal.

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## Endnotes

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<sup>1</sup> Organisation for Economic Co-operation and Development, *Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States* (Paris: Author, 2010), p. 19.

<sup>2</sup> Ibid., p. 93.

<sup>3</sup> Ibid.

<sup>4</sup> Howard L. Fleishman, Paul J. Hopstock, Marisa P. Pelczar, and Brooke E. Shelley, *Highlights from PISA 2009: Performance of U.S. 15-Year-Old Students in Reading, Mathematics, and Science Literacy in an International Context* (NCES 2011-004). Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2010.

<sup>5</sup> Organisation for Economic Co-operation and Development, *Pathways to Success: How Knowledge and Skills at Age 15 Shape Future Lives in Canada*. (Paris: Author, 2010).

<sup>6</sup> Jeannie Oakes, *Keeping Track: The Policy and Practice of Curriculum Inequality* (New Haven, CT: Yale University Press, 1986).

<sup>7</sup> Kelvin Pollard and Mark Mather, “10 Percent of US Counties Now ‘Majority-Minority’” (Washington, DC: Population Reference Bureau, 2008), <http://www.prb.org/articles/2008/majority-minority.aspx> (accessed October 12, 2010).

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EDUCATION OVERSIGHT COMMITTEE  
Draft Objectives for 2011-2012

2010-2011	2011-2012	Recommended Changes to 2011-12 Draft Objectives
<p>1. Continue the implementation of the Education Accountability Act of 1998, <i>as amended</i>, and fulfill other responsibilities assigned by the General Assembly including those within the Teacher Quality Act, the Parental Involvement in Their Children’s Education Act, the Education and Economic Development Act and those made by special requests, including:</p> <ul style="list-style-type: none"> <li>a. Monitoring the development of assessments and related resources linked to the Core Curriculum and communicating alignment with SC aspirations and instruction;</li> <li>b. Projecting instructional and assessment technology needs to facilitate on-line administration of the Common Core assessments;</li> <li>c. Increasing the impact of the accountability system on decisions which impact state, school and student performance;</li> <li>d. Ensuring the system is effective for the young people currently enrolled and for those young people to come;</li> <li>e. Evaluating the progress of all schools including separate reporting for public charter schools and schools in technical assistance; and</li> </ul>	<p>1. Continue the implementation of the Education Accountability Act of 1998, <i>as amended</i>, and fulfill other responsibilities assigned by the General Assembly including those within the Teacher Quality Act, the Parental Involvement in Their Children’s Education Act, the Education and Economic Development Act and those made by special requests, including:</p> <ul style="list-style-type: none"> <li>a. Monitoring the development of assessments and related resources linked to the Core Curriculum and communicating alignment with SC aspirations and instruction;</li> <li>b. <del>Projecting</del> <u>Monitoring</u> instructional and assessment technology needs to facilitate on-line administration of the Common Core assessments;</li> <li>c. Increasing the impact of the accountability system on decisions which impact state, school and student performance;</li> <li>d. Ensuring the system is effective for the young people currently enrolled and for those young people to come;</li> <li>e. Evaluating the progress of all schools including separate reporting for public charter schools and schools in technical assistance; <del>and</del></li> </ul>	

2010-2011	2011-2012	Recommended Changes to 2011-12 Draft Objectives
<p>f. Reporting on growth in achievement across two years of PASS data for the four core academic subjects.</p>	<p>f. Reporting on growth in achievement across <del>two</del> <u>three</u> years of PASS data for the four core academic subjects;</p> <p>g. <u>Reviewing the calculation of the improvement ratings; and</u></p> <p>h. <u>Promoting initiatives that encourage innovation and creativity.</u></p>	
<p>2. Measure progress toward the 2020 vision for statewide educational performance including:</p> <p>a. Ensuring that no student is enrolled in a school rated At Risk</p> <p>b. Working with stakeholder groups to understand state aspirations and the tasks necessary to achieve those;</p> <p>c. Adjusting or expanding reporting methods and content to increase sensitivity to growth in performance; and increased knowledge of the performance of students disaggregated by student instructional needs (i.e., EFA and EIA program codes) for the four core academic subjects; and</p> <p>d. Recommending actions for policy, practice and funding to accomplish the 2020 vision.</p>	<p>2. Measure progress toward the 2020 vision for statewide educational performance including:</p> <p>a. Ensuring that no student is enrolled in a school rated At Risk</p> <p>b. Working with stakeholder groups <u>including higher education</u> to understand state aspirations and the tasks necessary to achieve those;</p> <p>c. Adjusting or expanding reporting methods and content to increase sensitivity to growth in performance; and increased knowledge of the performance of students disaggregated by student instructional needs (i.e., EFA and EIA program codes) for the four core academic subjects; <del>and</del></p> <p>d. Recommending actions for policy, practice and funding to accomplish the 2020 vision; <u>and</u></p> <p>e. <u>Promoting more open dialogue about the gains, challenges and strategies to accomplish the 2020 vision.</u></p>	
<p>3. Increase the level of student reading proficiency by</p>	<p>3. Increase the level of student reading proficiency by</p>	

2010-2011	2011-2012	Recommended Changes to 2011-12 Draft Objectives
<ul style="list-style-type: none"> <li>a. Examining the performance of students, individual and in groups, to understand how where emphasis is needed in policy and practice;</li> <li>b. Linking student performance to instructional strategies and policies and promoting those which are most effective;</li> <li>c. Engaging the higher education community and other stakeholder groups in discussions of reading achievement to promote changes in teacher preparation and pre-kindergarten through grade twelve policies and practices;</li> <li>d. Promoting engagement of higher education students through service learning; and</li> <li>e. Establishing the framework for developing, implementing and evaluating strong policies and practices that enhance physical health, language development and reading proficiency among young people.</li> </ul>	<ul style="list-style-type: none"> <li>a. Examining the performance of students, individual and in groups, to understand how where emphasis is needed in policy and practice;</li> <li>b. Linking student performance to instructional strategies and policies and promoting those which are most effective;</li> <li>c. Engaging the higher education community and other stakeholder groups in discussions of reading achievement to promote changes in teacher preparation and pre-kindergarten through grade twelve policies and practices; <u>and</u></li> <li>d. <u>Working with the South Carolina Reading Achievement Systemic Initiative to promote a comprehensive reading policy.</u> <del>Promoting engagement of higher education students through service learning, and</del></li> <li>e. <del>Establishing the framework for developing, implementing and evaluating strong policies and practices that enhance physical health, language development and reading proficiency among young people.</del></li> </ul>	
<p>4. Develop a long-term strategy for increasing the utility of technology in instruction, including:</p> <ul style="list-style-type: none"> <li>a. Identifying funding sources for the infrastructure</li> <li>b. Identifying lead districts and examining how technology in instruction has been</li> </ul>	<p>4. Develop a long-term strategy for increasing the utility of technology, including:</p> <ul style="list-style-type: none"> <li>a. Identifying <del>funding sources for the infrastructure</del> <u>the availability and distribution of virtual courses in public schools;</u></li> </ul>	

2010-2011	2011-2012	Recommended Changes to 2011-12 Draft Objectives
<p>supported, utilized and with what impact on student achievement;</p> <ul style="list-style-type: none"> <li>c. Identifying cutting-edge strategies for use of technology to address traditional education functions; and</li> <li>d. Promoting a statewide commitment for world-class technology in our schools.</li> </ul>	<ul style="list-style-type: none"> <li>b. Identifying lead districts and examining how technology in instruction has been supported, utilized and with what impact on student achievement;</li> <li>c. Identifying cutting-edge strategies for use of technology to address traditional education functions; and</li> <li>d. Promoting a statewide commitment for world-class technology in our schools.</li> </ul>	
<p>5. Examine the performance of students to achieve at the highest level including:</p> <ul style="list-style-type: none"> <li>a. Determining the relationship between end-of-course test performance and course grades;</li> <li>b. Building a longitudinal PASS data base for the four core academic subjects; and</li> <li>c. Determining opportunities for high ability students to access the gifted and talented programs and advanced college preparatory work generally and in low-performing schools.</li> </ul>	<p>5. Examine the performance of students to achieve at the highest level including:</p> <ul style="list-style-type: none"> <li><del>a. Determining the relationship between end-of-course test performance and course grades;</del></li> <li>a. Building a longitudinal PASS data base for the four core academic subjects; and</li> <li>b. Determining opportunities for high ability students to access the gifted and talented programs and advanced college preparatory work generally and in low-performing schools.</li> </ul>	
<p>6. Fulfill responsibilities outlined in the General Appropriations Act.</p>	<p>6. Fulfill responsibilities outlined in the General Appropriations Act.</p>	