

SUMMARY



Designing strategy.
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3rd ANNUAL NORTH CAROLINA LEGISLATORS RETREAT

For two days in April, 2006, legislators confronted some of the thorniest challenges to public education in North Carolina. The James B. Hunt, Jr. Institute for Educational Leadership and Policy convened its *3rd Annual North Carolina Legislators Retreat*, with a special focus on the middle grades as the gateway to achievement in high school and beyond.

Co-hosted by former Governors Jim Hunt and Jim Holshouser, the Retreat was based on the premise that during the past decade, North Carolina has made significant improvement in early-grades education, as well as in high school reform—and that now is the time to turn attention to grades six, seven and eight. With the increased rigor in high schools, students in the middle grades need and deserve adequate preparation to be successful in high school, in community colleges and in universities.

Governor Hunt launched the Retreat with a strong appeal to legislators for boldness in facing the educational challenges confronting North Carolina. He noted a chart handed out to participants showing the U.S. ranking among nations on math and reading literacy as computed by the Organization for Economic Cooperation and Development. American 15-year-olds ranked 24th in math literacy and 15th in reading.

Highlights of the Retreat were announcements of policy initiatives by Erskine Bowles, the new president of The University of North Carolina, and Governor Mike Easley.

President Bowles delivered the keynote speech for the Retreat. The University system, he said, led the way to progress in North Carolina in the past, and “that’s what we’re going to do now.”

Bowles recalled his service to the United Nations in tsunami relief in Indonesia and Asia nations. He told of seeing first-graders in China, 40 to a classroom, learning math in English. He expressed concern that in another five years, 90 percent of the world’s engineers and scientists would be living in Asia.

“We’d better wake up,” he said. “The next new thing is going to be created in Asia.”

Bowles announced several initiatives, among

them: scholarship loans to students who pledge to teach in high-need areas, scholarships for lateral-entry teachers, and a pilot differential pay plan to entice young adults into teaching math and science.

During the Retreat, Governor Easley announced that he would recommend increased spending for middle schools to bring aboard literacy coaches.

“Literacy coaches,” he said, “will ensure that students in our middle schools are able to read and add to the system of seamless education that we

are building in North Carolina.”

“This new initiative will complement our nationally recognized *More at Four* program that makes sure kindergarteners are ready to learn, as well as our *Learn and Earn* program that allows students to graduate high school with an associate’s degree or university credit.”

Governor Easley urged legislators to see education as a “seamless” system that needs enhancement along the continuum, and he asked them to sustain initiatives that his administration, along with legislators, has taken: *More at Four*, small classes in the lower grades, more funding for low-wealth schools, and the set of high school reforms.

Through discussions with national and state leaders in business, education and public policy, legislators considered such questions as:

- What should our state do to improve the response of public schools to dramatic shifts in population and to economic restructuring?
- What should North Carolina schools learn from other nations to make public education more effective and rigorous?
- What steps, in particular, should North Carolina take in the short-term to bolster the teaching of literacy and mathematics?
- How should North Carolina continue to develop a testing system that results in higher achievement on the part of students and their schools?

The sections below summarize the discussions of each panel, and outline policy options that emerged from the conversations.

“This is appalling,” said Hunt. “We have to do better... If you want to fix high schools, fix middle schools.”

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Pictured in front, from left: Rep. Becky Carney, Rep. Joe Tolson, Rep. Susan Fisher, Rep. Maggie Jeffus, Rep. Jennifer Weiss, Sen. Kay Hagan, Rep. Thomas Wright and Rep. Margaret Dickson.

Pictured in back, from left: Rep. Dale Folwell, Rep. Pricey Harrison, Rep. William Current, Sr., Sen. Fletcher Hartsell, Jr., Rep. Phil Haire, Rep. Bill Daughtridge, Rep. Nelson Cole, Rep. Doug Yongue, Sen. A.B. Swindell, Sen. Katie Dorsett, Rep. Lucy Allen, Sen. John Garwood and Rep. Alice Bordsen

CREATIVITY AND ENTREPRENEURSHIP IN THE NEW ECONOMY

- Governor James B. Hunt, Jr.**, Chairman, Hunt Institute
- Dr. Jim Goodnight**, President, SAS Institute, Inc.
- Rusine Mitchell-Sinclair**, Senior State Executive, IBM Corporation
- Bill Shore**, Director of U.S. Community Partnerships, GlaxoSmithKline

The opening panel consisted of executives of three world-class businesses with deep roots in the Research Triangle area. Each represents a business that competes internationally and that seeks a highly skilled, highly educated workforce to maintain its competitive position.

The competitiveness of these companies depends on the creative capacity of their employees. They recruit from the United States and from abroad. As each panelist noted, such companies have difficulty finding qualified employees within the United States, particularly Ph.D.'s in scientific and mathematics fields. The overarching message from business

leaders was that the U.S. is failing to graduate enough students skilled in math, science and technology.

The business leaders expressed concern about whether the nation's education system has modernized sufficiently to sustain America's economic competitiveness and high standard of living. The fundamental structure of schools, designed in a farm and factory economy, has not changed for nearly a century.

Given the technological advances of the past 25 years, teachers today must compete with video games, the Internet and cellphones for students' attention. These devices provide students with constant stimulation and interaction. When at school, however, students are regularly asked to sit at desks with little or no interaction throughout the day. What's more, today's workplaces require working in teams, presenting schools with additional pressure in preparing students for the modern communication-age economy.

Thus, the panel of North Carolina business leaders issued the following challenge: ***A more innovative education system is needed to match the demands of the 21st century economy.***



Governor Jim Hunt moderates panel discussion with (L-R) Jim Goodnight, Rusine Mitchell-Sinclair, and Bill Shore.



Former Governor Jim Holshouser makes observation during discussion.

Policy Options:

- **Provide computers and access to the Internet for every student.** With every student having computer access, teachers can use more approaches in their lessons, therefore, supporting students' engagement with learning. Schools need broadband wiring, and classrooms need enough computers for every student in the humanities, as well as in math and science.
- **Offer more on-line classes.** The panel pointed out that on-line instruction can reach students in hard-to-serve schools, giving rural residents access to the kinds of classes offered in major city high schools and middle schools. Access to the Internet also enables North Carolina students to interact with students across the globe.
- **Provide students with a broad range of enrichment opportunities.** Students should have easy access to creative courses in art, music and drama, and extracurricular activities that promote creativity.
- **Update teacher training to reflect the most effective instructional methods, especially effective use of technology.** Schools of Education can provide better training for new teachers by instructing them to integrate technology effectively in their classrooms. The panelists pointed to the potential of on-line courses for teachers as an effective way to accomplish the goal of upgrading the state's corps of teachers.
- **Support more and stronger educational linkages between every community college and nearby high schools.** Through high school reform, North Carolina is building closer linkages between community colleges and high schools. The panel supported the deployment of the state's extensive community college system on behalf of the restructuring of public education, giving young adults more pathways to success.
- **Build partnerships with businesses to accomplish education goals.** Businesses can provide support and advice to school systems. Educating students for the 21st century requires collaboration with parents, civic leaders and the business community.

READING TO LEARN: CONFRONTING LITERACY IN THE MIDDLE GRADES

Dr. Jim Johnson, William R. Kenan Distinguished Professor of Entrepreneurship, Kenan-Flagler Business School, University of North Carolina at Chapel Hill

Dr. Susan Frost, President, Educational Priorities, Inc.

Dr. Timothy Shanahan, Professor of Urban Education, University of Illinois at Chicago

Dr. Louise Wilkinson, Distinguished Professor of Education, Psychology and Communication Sciences, Syracuse University

Literacy Skills and Changing Demographics

Strong literacy skills are critical to success in the workplace

and in society, at large. Poor reading skills prevent individuals from successfully finishing high school and, therefore, from entering postsecondary study with requisite skills or competing for employment that pays a living wage. Students must be provided the opportunity to master reading skills as early as possible so that reading becomes a tool for learning by the time they reach middle school. Reading comprehension is absolutely critical to success as students move through the middle grades and into high school.

According to Johnson, the Hispanic population is increasing nationally and is expected to reach 25 percent of the total population by 2050, up from 10 percent in 1995. As a comparison, the Black population is expected to remain steady while the White population will dip to about 52 percent of the total population, down from about 73 percent in 1995. North Carolina's population is also changing. According to the 2000 U.S. Census, the state is considered a "Hispanic magnet," with non-White growth accounting for more than half of the total population growth during the 1990s. In addition, between 1990 and 2000, of all the states, North Carolina experienced the *most* growth in its foreign-born population. Between 2000 and 2004, it was one of nine states experiencing more than a 50 percent increase in foreign-born population. With this trend, it is critical that we look at our schools to ensure we are providing *every student* with the literacy skills needed to succeed.



Dr. Jim Johnson leads literacy discussion.

Reading Performance in North Carolina

North Carolina's End of Grade (EOG) assessments show that more than 80 percent of fourth- and eighth-grade students are proficient in reading. However, according to the 2005 National Assessment of Education Progress (NAEP) results, only 36 percent of fourth-graders and *only 29 percent of eighth-graders are proficient in reading*. The disparity between the state and national assessments suggests that state tests may not be as rigorous as is necessary to ensure students are adequately prepared. In addition, the dropoff in performance between fourth- and eighth-grade students on the NAEP reinforces the case for improving reading instruction for students in the middle grades.



Dr. Louise Wilkinson references *Alliance for Excellent Education* report.

Our panel of national experts identified the following four challenges to improving reading instruction and offered some possible policy solutions:

I. Many students in our schools lack basic English skills and are learning English as a Second Language (ESL).

North Carolina's schools are experiencing higher percentages of Hispanic students, especially in Wake and Mecklenburg counties, resulting in higher numbers of ESL students. ESL students require specialized instruction and time to master English skills and course content.

Possible Policy Solutions:

- **Provide additional time for ESL students to build skills.** All students can learn when given adequate time and attention.
- **Invest resources in adult education, especially ESL courses.** Providing parents of ESL students with the opportunity to learn English would have a positive effect on students' success. One idea suggested during the panel discussion is to provide parents of ESL students with the standards translated into Spanish. Providing courses for parents at the school decreases feelings of intimidation toward the school and allows parents the opportunity to learn strategies that enable them to more effectively support students with homework.



Hunt Institute Chair and former Governor Jim Hunt challenges legislators.

- **Institute a statewide policy that provides and describes appropriate testing accommodations for ESL students.** Under *No Child Left Behind (NCLB)*, ESL students are entitled to adjustments in the ways they are tested in language arts for up to three years, and for mathematics there is no restriction on the number of years. States have the responsibility for determining how best to assess ESL students.
- **Develop a literacy guide that adequately supports immigrant students.** With ESL students entering at all grades, and at different abilities, educators need a guide for supporting all students as they build literacy skills.
- **Technology can be used to support ESL students as they build literacy skills.** Since ESL students often require additional time and attention from teachers, technology can be a useful tool for supporting self-directed learning.

II. Policies that guide instruction for students in all grades at the state and federal level—especially fourth-through eighth-grades—are lacking.

There is plenty of information regarding the literacy skills students need from kindergarten through 12th grade. The National Reading Panel covers reading education through the 12th grade, yet our schools tend to focus on reading instruction *only through third grade*. Research shows that teaching reading at all levels is beneficial and that the policies currently in place for the lower grades are effective.

Possible Policy Solutions:

- **Institute policies for grades four through eight that provide educators with a guide for effectively supporting older students.** Current interventions are designed for students *up to age nine*. Educators would benefit from strategies that would adequately support older students. The National Reading Panel offers recommendations for students at all grades and could be a useful source for developing policies.
- **Teach advanced comprehension skills, especially in the content areas.** Reading skills affect a student's ability to learn and master other subjects, like mathematics, history and science. Literacy instruction should be integrated *within the content areas*.



Representative Thomas Wright makes an ardent point.

- **Technology can be used to teach reading, especially with students in the middle grades.** Adolescent students will be more apt to attend to, and be interested in, content that is presented in an engaging manner.

III. Teachers are challenged to appropriately support ESL students and students with low literacy skills. With the increase in the ESL population, all teachers need to have experience in, and knowledge of, how to work effectively with all students. In addition, teachers in the middle grades need to understand how to effectively support students' literacy skills.

Possible Policy Solutions:

- **Provide diversity sensitivity training for all school personnel, and especially for teachers trained 20 years ago.** Building cultural sensitivity will enable teachers to better meet the academic needs of students.

IV. Teachers, especially those in the content areas, are not equipped to support students' literacy needs. Middle grades teachers who teach science, mathematics, social studies and other content courses need to know how to integrate literacy instruction into their courses. Each course has its own vocabulary and students would benefit from direct instruction regarding how to navigate these courses from a literacy perspective.

- **Provide professional development for all teachers, especially those in the content areas.** Professional development should be focused on improving teachers' ability to teach reading in the content areas and providing strategies for them to better support students' literacy skills. Professional development for teachers is most effective when it is ongoing, imbedded and provided on-site.
- **Ensure appropriate curriculum and learning standards are in place for each grade and content area.** These standards should be implemented effectively and appropriately, and with properly aligned assessments.
- **Develop innovative programs to recruit, develop and support teachers effectively.** Institute a high-quality, extensive induction program to ensure comprehensive support, especially during their first few years of teaching. The University of California at Santa Cruz is a model for induction programs. In addition, consider instituting pay-for-performance as motivation for teachers to build new knowledge that would enable better support of students.

Recommended Reading

Biancarosa, G., & Snow, C.E. (2004). *Reading Next—A Vision for Action and Research in Middle and High School Literacy: A report to the Carnegie Corporation of New York.* Alliance for Excellent Education, Washington, DC.

Kamil, M. (2003). *Adolescents and Literacy: Reading for the 21st Century.* Alliance for Excellent Education, Washington, DC.

Salinger, T. and Bacevich, A. (2006). *Lessons and Recommendations from the Alabama Reading Initiative: Sustaining Focus on Secondary Reading.* Prepared by the American Institutes of Research for the Carnegie Corporation of New York.

MATH IN THE MIDDLE GRADES: IS IT GOOD ENOUGH?

Sandy Kress, Partner, Akin Gump Strauss Hauer & Feld, LLP; former policy advisor to President George W. Bush

Dr. Richard Askey, Professor, University of Wisconsin at Madison

Dr. David Driscoll, Commissioner of Education, Commonwealth of Massachusetts

Dr. Hung-Hsi Wu, Professor, University of California at Berkeley

The Need for Mathematics Knowledge

Mathematics knowledge and skills are increasingly important assets in today's economy. According to the North Carolina Department of Commerce, the fastest growing industries in the state include biotechnology, technology, computer science and pharmaceuticals—with the biotechnology industry growing 10 to 15 percent each year. These jobs require keen critical thinking and problem-solving skills developed through exposure to a strong mathematics curriculum—a curriculum that is seemingly failing students across the U.S. As India, China and other countries compete for U.S. jobs, the strength of our economy will depend on a well-prepared, highly skilled workforce. In order to remain competitive, students entering the workforce must be able to use mathematical principles to solve problems and make effective, efficient decisions.



Dr. Hung-Hsi Wu (C) speaks as Dr. Richard Askey (L), Dr. David Driscoll and Sandy Kress listen.



Erskine Bowles, President of The University of North Carolina, delivers the Retreat's keynote address.

Major efforts, both in North Carolina and nationally, are currently underway to improve high schools by increasing the rigor and relevance of courses. However, mathematics performance on state and national tests demonstrates that students are not achieving at levels that prepare them to be successful with a more rigorous high school curriculum. According to the 2005 National Assessment of Education Progress (NAEP) results, 40 percent of fourth-graders and *only 32 percent of eighth-graders in North Carolina are proficient in mathematics.* The dropoff in performance between fourth- and eighth-grade students demonstrates the need to improve mathematics instruction in the middle grades. Furthermore, many students in the middle grades are entering high school without mastery of the most basic mathematical concepts, with 58 percent of 13-year-olds in the U.S. unable to calculate a simple percentage.

The State of Mathematics Instruction

Research shows that rigorous course-taking is a predictor of whether students will graduate and earn a college degree, however, only 41 percent of students in the country take mathematics courses beyond Algebra II. *In order to adequately prepare for college, students should*

successfully complete Algebra I in the middle grades. In North Carolina, it is suggested that students take Algebra I in the eighth grade, *only if they are ready for the rigor.* Otherwise, students typically do not take Algebra I until they reach high school. Even then, it is sometimes offered in two courses, rather than one, thus, watering down the course.

Many teachers in the middle grades do not possess sufficient content knowledge, which can be a deterrent to students' excitement about and achievement in content areas, especially mathematics. Nationally, only 32 percent of middle school mathematics teachers are certified *and* majored in the field, compared with 69 percent of high school mathematics teachers. *It is critical that schools be equipped with teachers who are knowledgeable about the subject.* This is especially critical in the middle grades—at a time when students are in jeopardy of dropping out of school.

According to NAEP, North Carolina's eighth-graders have maintained steady achievement in mathematics during the last two years, and have improved dramatically since 1992. However, with almost 70 percent of students still below proficient, more progress is needed. While North Carolina's most recent EOG assessments show that 84 percent of eighth-graders are proficient in mathematics, *the lower NAEP scores suggest North Carolina's students may not be performing as well as it seems and that state assessments may not be as rigorous.*

Our panel of national experts identified the following three barriers to improving mathematics instruction and offered some possible policy solutions:

I. Teacher knowledge is insufficient for ensuring students learn the rigor and relevance of mathematics. Preliminary research shows a high correlation between teachers with strong content knowledge and their ability to teach it. You can't teach what you don't know.



Representative Linda Johnson (L) shares her experiences from abroad regarding education as Senator Kay Hagan listens.



Representative Joe Tolson asks a question during panel discussion as Representative Susan Fisher listens.

Possible Policy Solutions:

- **Redesign teacher tests to reflect the rigor of required mathematics content.** In its current form, the Praxis test, required for licensure in North Carolina, is inadequate. In 1998, Massachusetts began requiring that all new educators pass a rigorous literacy test. In the first year, 49 percent of the teachers failed the test. As a result, literacy courses emerged to ensure that new teachers have the skills needed for effective teaching.
- **Require teachers to learn the course content in the grades above and below the grade they teach.** Teachers should know what is required of high school mathematics courses so they can make relevant connections for students.
- **Improve recruitment and retention of mathematics teachers by implementing differentiated salary schedules.** This will serve two purposes: (1) it will stem the tide of attrition rates, and (2) it will improve the quality of mathematics teachers. For example, provide major pay incentives for the first five years, while also tightening standards for those who teach middle school mathematics. Another example would be to develop a pay-for-performance model that provides higher pay for math specialists or math coaches.
- **Benchmark what teachers need to know against other countries' standards.** Singapore has demonstrated high mathematics standards, and as a result, is ranked first on the Trends in International Mathematics and Science Study (TIMSS), an assessment comparing the mathematics and science achievement of students in the U.S. with students in other countries.
- **Provide in-service professional development for mathematics teachers to supplement their skills and ensure knowledge.** In-service professional development should be intensive (content-rich),

extended (during a summer institute that is two- to three- weeks long) and be taught by a mathematician.

- **Supplement good standards with details about what should go on in the classroom.** There is currently a misalignment between the standards students should learn and the approach taken by teachers to achieve that learning. Provide course guides to ensure teachers understand what should be taught.
- **Create an interdisciplinary department with instructors from university mathematics and education departments to create substantive and relevant courses for prospective teachers.** Mathematicians are able to provide information to educators regarding the appropriate math content that teachers need to know in order to best support student learning.

II. Current mathematics courses and standards lack the rigor and sequencing needed to appropriately prepare students for success across the K-12 continuum, especially in the middle grades. Standards should be aligned across grades so that students are prepared from one grade to the next. The lack of rigor in the middle grades and emphasis on reinforcing skills, rather than skill-building, leaves middle school students ill-prepared for a rigorous high school curriculum.



Representative Nelson Cole raises a question as Governor Jim Hunt looks on.



Representative Lucy Allen makes an inquiry during the panel discussion.



Representative Edward Jones responds to the panel presentation.

Possible Policy Solutions:

- **Reassess the rigor of tests to ensure North Carolina's test results align with students' actual knowledge.** With more than 80 percent of students scoring proficient on EOGs, but only 32 percent scoring proficient on NAEP, *it is uncertain whether North Carolina's students are tested with enough rigor.*
- **Participate in the TIMSS test to generate comparisons between North Carolina and other countries.** With the emergence of a global economy, it would be informative to show comparisons among states and countries. Beginning in 2007, states will have the opportunity to participate in the TIMSS and *it was recommended that North Carolina do so.*
- **Improve textbooks to reflect appropriate sequence of standards and content, and tighten up selection criteria.** Mathematicians would be a useful resource to support school districts to make such selections.
- **Require high school exit criteria in mathematics.** Setting a baseline for the content all students should master by the end of high school would cause educators to ensure appropriate sequencing across grades to achieve that goal. For example, Massachusetts is considering an Algebra II test that all high school students would have to pass in order to graduate.
- **Use mathematicians and educators to inform policies related to curriculum and sequencing.** Mathematics is a technical subject and should be carefully sequenced in order to promote student learning. *University mathematics professors would be invaluable resources to state departments of education in constructing standards and setting guidelines.*
- **Increase the amount of instructional time students receive.** Many other countries have a longer school day and/or school year, which provides additional instructional time for students to learn and master content. For example, students in India attend school for a total of 210 days per year. After 12 years of school, students have received more than two years of additional instructional time than students in the United States.

III. It is critical that educators and policymakers convey a sense of urgency regarding the importance of mathematics knowledge in today's economy. The public does not understand that North Carolina is not competing against Virginia, but rather China, Singapore and India, in the global economy. A 2006 *Public Agenda* report noted that 53 percent of parents of middle school students and 70 percent of parents of high school students believe "things are fine" in regard to the amount of math and science knowledge their child is learning. Stakeholders, especially parents, need to understand the urgency of the situation.

Possible Policy Solutions:

- **Use the bully pulpit.** Policymakers can draw attention to the issue and create momentum for change by sending a consistent message to the public.
- **Help people understand the issue.** The public will continue to be complacent without adequate knowledge of and dialogue about the issue.
- **Inspire a "Sputnik-like" calling to get the public's attention.** The public needs something visual to get their attention and promote action.
- **Set high standards across the board to demonstrate the urgency of the issue.** Stakeholders will take note when state leaders and policymakers take bold steps to raise standards and promote achievement.

In addition to the recommendations listed above, panelists were careful to urge legislators to *make investments for the long haul*. The issues that we face as a state, and as a nation, will not be fixed overnight. A focused, comprehensive vision with deliberate action is required to build a sustainable system that will provoke the desired outcome: a highly skilled and knowledgeable workforce.

Recommended Reading

Ma, Liping. (1999). *Knowing & Teaching Elementary Mathematics: Teachers' Understanding of Fundamental Mathematics in China and the United States (Studies in Mathematical Thinking and Learning)*. Lawrence Erlbaum Associates, Inc. Publishers, Mahwah, NJ.



Representative Maggie Jeffus gives a comment.



Representative Bernard Allen makes a point regarding education issues.



Representative Rick Glazier asks question of panel.

ASSESSMENT: WHAT WE NEED TO KNOW

Governor James B. Hunt, Jr., Chairman, Hunt Institute
Dr. Charles Reed, Chancellor, The California State University
Dr. Grant Wiggins, President, Authentic Education

The Need for Improved Assessment Systems

In 1996, North Carolina led the way in the standards and assessment movement when it created the ABCs accountability system. It has been 10 years since that effort, and *it is time to reassess the effectiveness of the state's assessment and accountability system.* With the shift to a global economy, it is critical that our workforce be ready and prepared to compete with other nations. In the past, the U.S. was considered “high-tech, high-wage.” Today, India is considered “high-tech, low-wage.” In order to maintain its standard of living, the U.S. must take bold steps to be better than the rest of the world.

With these global changes comes the challenge of making sure we are educating our students for the global market. Our students need to have access to rigorous content, and we need to be sure we measure learning of that content with rigorous assessments. It is commonly known that we teach what we test and test what we teach. Therefore, *it is essential that our tests are measuring the skills and knowledge students require to compete in today's world.*

Our panel of national experts identified the following three barriers to improving the assessment system in North Carolina and offered some possible policy solutions:

I. Assessments are not aligned with the colleges and universities and do not align with the actual skills needed for success in the global economy. In order to ensure students are appropriately prepared for college or the workforce, it is critical that the K-12 public education system collaborate effectively with the university system. Many students require remediation courses upon entering college, indicating the mismatch between secondary preparation and postsecondary requirements. In addition, stakeholders—including teachers, parents and students—need to understand what skills are needed for success in today's economy. State education leaders should create systems that allow consumers to make sound decisions about their education.

Possible Policy Solutions:

■ **Create alignment between K-12 and the university system.** The California State University (CSU) is taking on the responsibility for improving public education and has implemented an Early Assessment Program (EAP). The University has taken the view that K-12 and higher education are one big system responsible for ensuring all students have the opportunity to get a good education. The EAP aligns the CSU placement standards with the K-12 state standards in English

language arts and mathematics. The goals of the program are to increase the English and mathematics proficiency of freshmen entering CSU as a result of earlier interventions in high school, and to help reduce the remediation rates of incoming university freshmen. *By participating in EAP, students in the 11th grade have the opportunity to identify their individual need for additional preparation for college-level courses and to adjust their senior-year coursework accordingly, making senior year more meaningful.*

- **Create materials that map the road to college.** Parents and teachers will be better equipped to advise students if comprehensive information is provided. Some parents are not prepared to appropriately direct and advise their children. Parents are a critical link toward ensuring students progress through school learning the skills needed for their future. CSU developed and distributed a wall chart entitled, “How To Get To College.” The chart outlines the steps that parents and students should take, beginning with sixth grade, in order to acquire the skills needed to go to college. The chart was printed in seven languages, including Spanish, and sent to parents across the state.



Dr. Grant Wiggins gets precise when responding to a question regarding assessment.



Legislators navigate through CSU's “How To Get To College” roadmap.

- **Ensure teachers are adequately prepared to teach students what they need to know.** Summer institutes can provide teachers with intensive training and strategies to support students' reading comprehension and mathematics skills. In California, this sort of training is paid for with state budget dollars and is cheaper than paying for remedial courses.

II. Assessments measure knowledge and content, rather than performance. Current tests do not measure transfer—the ability to take what you have learned and use it. According to the panelists, the research on transfer is grim. Historically, our education system has done a poor job of creating transfer for students. Designing and implementing performance-based assessments is critical.



Senator Kay Hagan discusses how other countries are educating for the future. She is joined on the panel by Representative Doug Yongue.

Possible Policy Solutions:

- **Develop assessments that address what students can do, not just what they know.** The quality of the question is important toward ensuring a high degree of challenge. Using open-ended questions requires students to demonstrate how they use knowledge for problem-solving and critical thinking. It is critical that we create tests that assess how students use knowledge to solve a problem that does not have an easy answer. *Our current test items are like “warm-up drills.*
- **Adjust the cut scores on state assessments to ensure rigor.** It is important that students be *required to get a certain number and kind of question correct* in order to demonstrate proficiency on state assessments.

III. Assessment systems lack timely feedback to the teacher and the student. Feedback is a critical factor in the learning process, both for teachers and students. Teachers need timely feedback in order to know whether

students learned the content that was taught. Students need feedback so they can set personal goals and develop an accurate view of their own academic strengths and weaknesses. Feedback on state tests is inadequate with many states taking months to analyze and distribute results.

Possible Policy Solutions:

- **Institute a feedback system that gives teachers timely, accurate data about what students know and can do.** Test results should be released expediently so that teachers can make use of the results. According to *The Teaching Gap*, teachers in Japan spend 30 hours per year analyzing their students' results. It is part of their job, as a teacher. Many teachers do not receive results that can be used in the same school year. The current system is more like an audit than a feedback system. Both systems provide useful, but different types of, data.
- **Provide feedback to students so they can assess their own performance in regard to the standards.** Give students two kinds of grades: the typical letter grade, and one based on the same scoring scale the state uses for its assessments. This sort of grading requires comprehensive understanding of the standards. Again, California's EAP provides 11th-grade students with feedback on their academic strengths and weaknesses. One aspect of this system is that students and parents receive a letter that outlines their performance.
- **Require the state to release all test items.** Many teachers never see the test items and, therefore, are unable to analyze their students' successes and failures. This self-reflection is beneficial for the teacher for their own professional development. It allows them to make direct connections between their teaching, the standards and student learning. Because test items can be costly, a rotating system can be created to lower the cost of a new set of items every year. Massachusetts and New York release tests as soon as they are completed.
- **Create a testing schedule that allows parents to use the information to make decisions about a student's involvement in extracurricular activities.** Currently, assessments are scheduled after basketball and soccer season are over. Typically, testing results do not return until the end of the summer. Efforts should be made to look at the full picture in regard to the testing schedule.

Recommended Reading

Sigler, James W. & Hiebert, James. (1999). *The Teaching Gap: Best Ideas from the World's Teachers for Improving Education in the Classroom*. The Free Press, New York, NY.

A VIEW FROM ABROAD: HOW OTHER COUNTRIES ARE EDUCATING FOR THE FUTURE

John Dornan, Executive Director, Public School Forum of North Carolina

The Honorable Katie Dorsett, North Carolina Senate, District 28

The Honorable Kay R. Hagan, North Carolina Senate, District 27

The Honorable Linda Johnson, North Carolina House of Representatives, District 83

The Honorable Doug Yongue, North Carolina House of Representatives, District 46

The Retreat closed with legislators sharing their perspectives on education systems abroad. During the past several years, panelists have visited several countries, including China, India and South Korea, through trips coordinated by the Public School Forum of North Carolina and the North Carolina Center for International Understanding. The following key points represent the observations and examples shared by panel members:

- Other countries place a very high value on education and teachers are well-respected. Students know what they want to do at an early age and many are interested in pursuing careers in science and math. In India, for example, engineering is the highest regarded profession, with medicine being the second highest.
 - China and India, specifically, are taking deliberate steps to popularize science.
 - Students in other countries spend more time at school than students in the United States. For example, in
- China, students attend six days per week. In South Korea, high school students spend a total of two years more in school than students in the United States and over the course of their career, students spend five more years in school. Students in India attend school for 210 days.
 - The level of academic rigor is greater in other countries compared to the United States. For example, in China, observations of a first grade classroom revealed 42 students in a classroom, each with a computer and working on math problems in English.
 - Students in some countries experience great pressure in regard to academic achievement. For example, in South Korea, there is significant competition for placement in college, which is determined by an exam. China also has a testing program which determines a student's career path.
 - Technology was an important component in schools and seemed to play a larger role than in the United States.
 - Other countries place a bigger emphasis on learning and speaking foreign languages. For example, a three-year-old in India was able to say, "Hello" without prompting, when she observed an American in her presence.
 - New teachers must receive 240 hours of staff development—four times what we give teachers in North Carolina. Yet, teachers spend about half the contact time with students with students than teachers in our state.
 - Government plays a critical role in establishing clear, educational goals that are directly linked to the economic goals of the country.

For additional information about the NCLR, or about recommendations contained within this publication, please contact the Hunt Institute at (919) 843-4085.



Senator Katie Dorsett highlights what she has witnessed abroad in the area of education.



Representative Doug Yongue makes observation during panel discussion.

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