

# FOSTERING INNOVATION IN EDUCATION

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## FIELD HEARING OF THE COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS UNITED STATES SENATE ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

ON

EXAMINING ELEMENTARY AND SECONDARY EDUCATION ACT (ESEA)  
REAUTHORIZATION, FOCUSING ON FOSTERING INNOVATION IN EDU-  
CATION

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APRIL 19, 2010 (Charlotte, NC)

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Printed for the use of the Committee on Health, Education, Labor, and Pensions



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U.S. GOVERNMENT PRINTING OFFICE

56-125 PDF

WASHINGTON : 2012

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## FOSTERING INNOVATION IN EDUCATION

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MONDAY, APRIL 19, 2010

U.S. SENATE,  
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS,  
*Charlotte, NC.*

The committee met, pursuant to notice, at 10:58 a.m., at E. E. Waddell High School, 7030 Nations Ford Road, Charlotte, NC, Hon. Kay Hagan presiding.

Present: Senator Hagan.

### OPENING STATEMENT OF SENATOR HAGAN

Senator HAGAN. All right. The Senate Committee on Health, Education, Labor, and Pensions will come to order. I want to start by thanking the principal, Lisa Bowen, and the assistant principals, Jed Yakin and Marvin Bradley, here at E. E. Waddell High School for hosting our hearing today.

I know we were talking to the principal earlier, and we would like the ROTC to join us to say the Pledge of Allegiance. So if we could go ahead and do that, that would be wonderful.

Are they ready?

[Pledge of Allegiance.]

Senator HAGAN. Thank you. That was excellent. I want to thank our students.

I recently got back from visiting our troops in Iraq and Afghanistan and also got to go to Pakistan, and I am so incredibly proud of the young men and women who are serving us in our country today overseas and here at home to keep us safe. They are just doing an incredible job. These young men and women I know, too, are doing a great job here. So thank you very, very much.

I know that here at E. E. Waddell, this is the only early college high school model in the Charlotte-Mecklenburg school system. I know the early college high school programs are so important in preparing our students to compete in the global marketplace, and I am happy to know that so many students are taking advantage of this program.

I was actually a member of the State legislature when we first started forming the early colleges, and I had an intern—a young woman who had dropped out of high school, attended early college at GTCC, and then became an intern for me, she then matriculated to UNC-Chapel Hill and graduated. So let me tell you, our early college programs are a true success in North Carolina.

I know that there is a civics and government class here attending the hearing this morning, and I just want to welcome the students here. Thank you very much for coming. It is great to see that you

are interested in how government works, and I apologize for having my back to you for some of this meeting.

But as our country's future leaders, everything we do is for you right here. So thank you for being here. We look to you to be the leaders of the future here in the United States.

I also want to thank all of the witnesses for being here to share your thoughts, and insights with us. As educators and advocates from across the State and the U.S. Department of Education, it is people like you that the rest of us count on to do this very incredibly hard work and very rewarding work.

As the Health, Education, Labor, and Pensions Committee continues in a series of hearings like this in preparation for the reauthorization of the Elementary and Secondary Education Act, I thought it was important to hold a hearing here in North Carolina so that I can hear firsthand what is going on in the State and ask others what is important to them.

Fostering Innovation in Education is a broad topic and one that can be interpreted and applied in many different ways, but it is certainly not a concept unfamiliar to us in North Carolina. Our State was first in flight when the Wright brothers first gave man the ability to fly. We were the first to have a public university, an institution that has made a commitment to providing quality education to all North Carolinians, regardless of economic background.

When I tell people in Washington that North Carolina was the first public university, they say the Harvards and the Princetons were before us, but those are private universities. We were the first State to have a public higher institute of education. We also have one of the best community college systems in the country, and we have produced a program that allows high school students to enroll in community college classes and, in many instances, graduate from high school with a 2-year degree already in hand.

We know how to leverage private-public partnership as evidenced by rural Bertie County, who partnered with Internet provider CenturyLink to provide broadband Internet in 1,500 homes of students in Bertie County for 5 years.

We are also a leader in recruiting great teachers and leaders for our most struggling schools, measuring teacher effectiveness, and compensating teachers for their performance. Across the country, people look to this school district here where we are visiting today, Charlotte-Mecklenburg, one of the largest school districts in the State, as the leader and innovator in improving the performance of the adults in the classroom, guided by the belief that every child deserves a highly effective teacher.

I just saw Jennifer Roberts come in. Jennifer is the chairman of the county commissioners. I really welcome and appreciate you being here today, too.

In North Carolina, we understand that our economic strength as a country is dependent on ensuring that we have well-educated and highly skilled workers ready to compete in the global marketplace. Research and statistics already demonstrate that if we do not improve the quality of our public schools and outcomes for our children, our country is going to lag behind other developed nations. The longer we wait to fix this problem, the worse off we know we will be.

Studies show that in North Carolina, for every freshman class in high school, approximately 46,000 students don't graduate 4 years later. Experts estimate that the lost lifetime earnings for those 46,000 students will total over \$12 billion. So be sure that we communicate to all of your friends and fellow classmates they have got to stay in school. That should be frightening for all of us.

Something else frightening is that the Department of Education estimates that there are approximately 5,000 chronically underperforming schools in the country. That is nearly 5 percent of our Nation's public schools. We certainly cannot afford to allow chronically underperforming schools to get away with improperly serving our students.

Turning around these schools I know is a daunting task, but we in North Carolina are up to the challenge, and we are already way ahead of the game. We also must ensure that every child is receiving a well-rounded education. I am a strong believer that subjects including reading, math, and science are important. But it is also important to have art, music, and foreign language that keeps our kids coming back to school day in and day out.

I also believe that we need to have financial literacy education. Just as I have done in North Carolina, the first bill that I introduced in the U.S. Senate is the Financial Literacy for Students Act, which will incentivize States to incorporate curriculum in grades 6 to 12 to teach our kids about finance. I think it is a critical component to ensuring that our kids are career and college ready, and we must do a better job of educating students on financial literacy.

The Administration's blueprint represents some significant improvements from No Child Left Behind. I especially appreciate the focus on creating college- and career-ready students and the emphasis on the creation of and continued use of innovative programs that work.

As the only developed Nation with a younger generation of students that people say have a lower level of high school or equivalent education than the older generation, we have a lot of work to do, and the time is now. We have to make tough choices if we are going to accomplish our President's goal that every child being career- and college-ready by 2020 and that the United States will lead the world in college completion by that year as well.

I believe that the decisions that we make and the work that we do in Congress will undoubtedly have a major impact on future generations.

Thank you for being here with us today.

I am going to introduce the witnesses, and then we will start.

First, Shivam Shah is the Director of Special Initiatives in the Office of Innovation and Improvement at the U.S. Department of Education. Shivam is responsible for leading the development and implementation of the Promise Neighborhood initiative and many other innovative programs at the Department of Education.

Next, Rebecca Garland, chief academic officer for the North Carolina Department of Public Instruction. As chief academic officer, Dr. Garland provides leadership in all areas involving curriculum, instruction, accountability, and teacher quality, just to name a few.

And following Dr. Garland is Mrs. Ann Clark, who comes from my hometown of Greensboro. Mrs. Clark is the chief academic offi-

cer here in Charlotte for the Charlotte-Mecklenburg School District. Mrs. Clark held a variety of teaching and administrative positions at CMS since joining the district in 1983.

Mrs. Margaret Arbuckle is the executive director of the Guilford Education Alliance, a county-wide nonprofit organization that supports quality education for all of Guilford County's children. Our children grew up together, so Dr. Arbuckle and I go way back.

Bryan Setser is the executive director of North Carolina's Virtual Public School. He is an innovative leader who has tripled our on-line enrollment to over 65,000 students.

Following Mr. Setser is Karl Rectanus. Karl leads our NC STEM Community Collaborative, and in this role, he works to align North Carolina communities to successfully structure science, technology, engineering, and math disciplines in their schools.

And then last, but certainly not least, is Mrs. Mary McCray, who has been an elementary schoolteacher for 32 years and has taught in the Charlotte-Mecklenburg School District for the last 22 years. And if that isn't enough, Mrs. McCray also is the president of the Charlotte-Mecklenburg Association of Educators, an affiliate of the NEA.

Now we will begin with Ms. Shah for testimony. We will ask you to limit your testimony to 5 minutes. Once you have concluded your remarks, we will begin the question and answer portion of the hearing.

Before we begin, I did want to also mention Vilma Leake. Vilma Leake is a country commissioner and one of my dear friends. I also would like to acknowledge Avery Staley from the Lieutenant Governor's office. Thank you.

OK, Ms. Shah.

**STATEMENT OF SHIVAM MALLICK SHAH, DIRECTOR OF SPECIAL INITIATIVES, OFFICE OF INNOVATION AND IMPROVEMENT, U.S. DEPARTMENT OF EDUCATION, WASHINGTON, DC**

Ms. SHAH. Good morning, everyone.

Senator Hagan, thank you for the opportunity to address this committee and the students, faculty, and friends of the E. E. Waddell High School to discuss the ways in which the U.S. Department of Education is committed to fostering innovation in education. And thank you for your support locally here in North Carolina, as well as nationally.

It is no secret that to keep up with the demands of a global economy, every student must graduate high school with college- and career-ready skills. But the reality is that 3 in 10 students fail to complete high school on time, and of those who do, only two-thirds enroll in a college or university. Completion rates for those who seek a post-secondary degree or certification do not keep pace with enrollment. The statistics for minority students, low-income students, and English language learners are dramatically worse.

What many of our schools need, to ensure that every student achieves success, is transformational change. It is not simply tinkering around the edges. Previous Federal efforts to improve our education system have largely been incremental, and they have yielded results that were less than adequate.



Today, however, we have a tremendous opportunity to re-envision and renew what public education looks like, and three factors have set the stage. First, President Obama is committed to the ambitious, but attainable goal of ensuring that America will regain its lost ground and have the highest proportion of students graduating from college in the world by 2020.

Second, thanks to leadership from President Obama and Congress, the American Recovery and Reinvestment Act of 2009, the recovery bill, provided nearly \$100 billion to support education, including a \$5 billion investment for Race to the Top and the Investing in Innovation Fund, the largest one-time Federal investment in education in history. These funds heavily invest in education, both as a way to provide jobs now and to lay the foundation for long-term prosperity.

Our Nation's economic competitiveness and the path to the American dream depend on providing every child with an education that will enable them to succeed in a global economy. That success is going to be predicated on both knowledge and innovation. And, finally, Congress is working to reauthorize the Elementary and Secondary Education Act of 1965, which we hope will not only fix the problems of No Child Left Behind, but again establish a re-envisioned Federal role in education.

To take advantage of this unprecedented opportunity, we must identify, support, and evaluate new educational models—models that focus on improving outcomes for students, teachers, and principals. And we must acknowledge that most of the best ideas come from local educators and are locally grown. That is why the Department of Education is committed to investing in evidence-based innovation to enhance the programs that we know are working and to bring them to scale.

I want to tell you a little bit about the Investing in Innovation fund, which is the program that I run. It is one of the stimulus-created funds. It is a \$650 million fund, which provides competitive grants to school districts and nonprofits to expand the implementation of and investment in innovative practices in four areas—supporting effective teachers and principals, improving the use of data to accelerate student achievement, complementing the implementation of standards and assessments that do prepare students for success in college and careers, and turning around the persistently low-performing schools you described earlier.

Grantees will also be required to form partnerships with the private sector to obtain matching funds. Applicants will be required to propose projects that develop or expand innovation in critical areas of education reform that will benefit high-need students. We are requiring that practices supported by i3 grants have a demonstrated effect on improving student achievement or student academic growth, closing achievement gaps, decreasing dropout rates, increasing high school graduation rates, or increasing college enrollment and college completion rates.

Through i3, we are introducing a new rigorous, three-tiered evidence framework, which will direct different levels of funding to programs at different levels of development. Essentially, the highest level of funding will go to those programs with the strongest evidence. So there are three types of grants.

There are development grants, which require a reasonable hypothesis, and those will be used to support practices that are really still at an earlier stage of development. More fresh ideas, not necessarily new, but less proven.

Validation grants will require a moderate level of evidence, and these grants will be aimed at validating and spreading promising programs to a regional scale.

And then scale-up grants, which are the largest, in which applicants can request up to \$50 million, will require strong evidence and will be aimed at bringing proven programs to national scale.

In an effort to support what works, the i3 program also contains a robust evaluation component. We want to make sure that when Federal dollars are supporting work in the field that we can show over time that these programs are working and moving the needle for kids.

We are going to require grantees to conduct independent program evaluation. We will broadly share the results of that work and of any evaluation of any i3-funded effort. Grantees must also participate in a "community of practice" so that they can share, document, and disseminate to the field the best practices and lessons that they have learned.

On March 12th, the department released a notice inviting applications for i3 applications. Since then, we have received almost 2,500 letters of intent to apply. We have also reached out and had three pre-application workshops in which over 4,000 people registered. By all measures, this was an unprecedented level of interest in a competitive grant program, and our team is gearing up to get ready to review and find some great ideas to support. But we think this level of interest is indicative of the enthusiasm around the country to innovate and to scale up effective, local strategies.

So we are doing a lot at the department that we are excited about. i3 is just one component of that innovation work. We are requesting an additional \$500 million in the ESEA. But aside from i3, we hope to use those funds to support a range of programs, including additional things like the early college high school programs you described, from financial literacy efforts, STEM projects, and a whole range of different things that we see working in the field that we would like to help bring to scale to help more kids achieve.

Thank you.

[The prepared statement of Ms. Shah follows:]

#### PREPARED STATEMENT OF SHIVAM MALLICK SHAH

Good morning, Senator Hagan. Thank you for the opportunity to address this committee and discuss the ways in which the U.S. Department of Education is committed to fostering innovation in education. And thank you for your support for education, both here in North Carolina and nationally.

#### BACKGROUND

It's no secret that, to keep up with the demands of a global economy, every student must graduate from high school with college- and career-ready skills. But the reality is that 3 in every 10 students fail to complete high school on time and, of those who do, only two-thirds enroll in a college or university. Completion rates for those who seek a post-secondary degree or certification do not keep pace with enrollment. The statistics for minority students, low-income students, and English learners are dramatically worse.

What many of our schools need to ensure that every student achieves success is transformational change, not simply tinkering around the edges. Previous Federal efforts to improve our education system have largely been incremental and yielded results that were less than adequate.

Today, however, we have a tremendous opportunity to re-envision and renew what public education looks like, and three factors have set the stage. First, President Obama is committed to the ambitious but attainable goal of ensuring that America will regain its lost ground and have the highest proportion of students graduating from college in the world by 2020. Second, thanks to leadership from President Obama and Congress, the American Recovery and Reinvestment Act of 2009 (Recovery Act) provided nearly \$100 billion to support education, including a \$5 billion investment for Race to the Top and the Investing in Innovation Fund, the largest one-time Federal investment in education in history. These funds invest heavily in education both as a way to provide jobs now and to lay the foundation for long-term prosperity. Our Nation's economic competitiveness and the path to the American Dream depend on providing every child with an education that will enable them to succeed in a global economy that is predicated on knowledge and innovation. And, finally, Congress is working to reauthorize the Elementary and Secondary Education Act of 1965, which we hope will not only fix the problems of the No Child Left Behind Act, but also establish a re-envisioned Federal role in education.

To take advantage of this unprecedented opportunity, we must identify, support, and evaluate new educational models—models that focus on improving outcomes for students, teachers, and principals. And we must acknowledge that most of the best ideas, policies, and practices are locally grown. That is why the Department of Education is committed to investing in evidence-based innovative practices to enhance these programs and bring them to scale.

#### INVESTING IN INNOVATION

One program designed to do just that is the Investing in Innovation program, or i3. i3 provides for \$650 million in competitive grants to school districts and non-profit organizations to expand the implementation of, and investment in, innovative practices in the following four areas:

1. Supporting effective teachers and principals;
2. Improving the use of data to accelerate student achievement;
3. Complementing the implementation of standards and assessments that prepare students for success in college and careers; and
4. Turning around persistently low-performing schools.

Grantees will also be required to form partnerships with the private sector to obtain matching funds. Applicants will be required to propose projects that develop or expand innovations in critical areas of education reform that will benefit high-need and other students. We are requiring that practices supported by an i3 grant have a demonstrated effect on:

1. Improving student achievement or student academic growth;
2. Closing achievement gaps;
3. Decreasing dropout rates;
4. Increasing high school graduation rates; or
5. Increasing college enrollment and completion rates.

Through i3, we are introducing a new rigorous, three-tiered evidence framework that will direct different levels of funding to programs at three different stages of development, with the highest level of funding going to programs with the strongest evidence:

1. Development grants will require a reasonable hypothesis that the practice or strategy will result in significantly improved outcomes. The purpose of these grants will be to develop fresh ideas;
2. Validation grants will require moderate evidence of effectiveness. These grants will be aimed at validating and spreading promising programs to a regional scale; and
3. Scale Up grants will require strong evidence and will be aimed at bringing proven programs to national scale.

In an effort to support what works, the i3 program also contains a robust evaluation component. We will require grantees to conduct an independent program evaluation and we will broadly share the results of any evaluations of i3 funded efforts. Grantees must also participate in a "community of practice" to share, document, and disseminate to the field best practices and lessons learned.

On March 12, the Department released the notice inviting i3 applications. Since then, more than 2,400 letters of intent to apply have been submitted to the Depart-

ment and approximately 4,000 people have participated in the three pre-application workshops and webinars. Interest in the i3 grant program has been tremendous, and is indicative of the enthusiasm that exists around the country to innovate and to scale up effective, local strategies.

To help i3 applicants and to serve the larger purpose of creating an innovation community, the Department of Education has launched an online community, called the Open Innovation Portal. Though not a formal part of the i3 grant process, the portal is the first national forum that connects entrepreneurs, education stakeholders of all types, and funders for the purpose of partnering and developing and funding innovative ideas in the education sector. Through this portal, the Department hopes to provide a forum for like-minded individuals, who may choose to work in partnership, to accelerate the development, identification, and broad use of innovative products, practices, and processes to improve education in schools.

#### INNOVATION IN ESEA

The reauthorization of the ESEA provides an opportunity to continue the i3 program. Our reauthorization proposal would build on the current i3 program, and provide additional competitive grants to expand the implementation of, and investment in, innovative and evidence-based practices, programs, and strategies that significantly improve student outcomes. The Secretary would continue to use a rigorous three-tiered evidence framework that directs the highest levels of funding to programs with the strongest evidence.

The Secretary could also give preference to applications that propose to develop or expand innovations in specific pressing needs, such as improving the teaching and learning of science, technology, engineering, and math (STEM) subjects, improving early-learning outcomes, addressing the learning needs of English learners and students with disabilities, and serving schools in rural areas. The Secretary could also reserve funds for inducement prizes to drive breakthrough innovations in education or for dramatic and innovative approaches to improving educational outcomes.

In addition to developing and scaling up programs through i3 that have demonstrated success and working to discover the next generation of innovative solutions, we want the reauthorized ESEA to support many effective strategies that are already in broad use. Those include innovative strategies such as charter schools, full-service community schools, Promise Neighborhoods, virtual schools, magnet schools, and early college high schools—of which I know you are a strong supporter, as well as whole school reforms such as lengthening the school day or year, and transforming school culture.

#### CONCLUSION

Innovation in education is more than just trying something new. It's about implementing and expanding strategies that improve outcomes. To help drive innovation in education, the Department of Education will look to the field for the best ideas, ideas that typically come from local educators. And we will offer incentives to States, districts, and nonprofit organizations to work together on efforts to implement and share effective strategies, evaluate and enhance them, ensure their long-term sustainability, and bring them to scale.

Senator HAGAN. Thank you.

Ms. Garland.

#### **STATEMENT OF REBECCA GARLAND, CHIEF ACADEMIC OFFICER, NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION, RALEIGH, NC**

Ms. GARLAND. Thank you, Senator Hagan, for inviting me here today to talk about innovation in North Carolina, and I also thank you for your continued support of the public school students in North Carolina with your work in the General Assembly and in the U.S. Senate.

In August 2006, the State Board of Education adopted a visionary, ambitious strategic plan for improving public education in our State, and that plan continues to be in action today. The plan itself outlines efforts within five goal categories.

The first, globally competitive students, which involves the State boards working with standards and assessments. Twenty-first century professionals are working at improving effectiveness among teachers, school leaders, and the preparation programs at higher education and making sure that we have healthy students and students who are able to develop responsibility in child nutrition and financial literacy and civic engagement and in environmental literacy, that we have innovative programs that are seamless for post-secondary and that we improve our data systems.

It is ironic that four of our five goals showed up in the Race to the Top four pillars. The primary author of that strategic plan was at that time Lieutenant Governor Beverly Perdue and since being elected as the Governor of the State has continued the initiatives started in that strategic plan and has enhanced them through her Ready, Set, Go agenda.

While North Carolina has many innovative programs, I will focus on education programs and policy that is innovative and has a State-wide impact. Even before the Common Core discussions among the various States, North Carolina made a commitment to rewrite its entire standard course of study and to rewrite all of the end-of-course and end-of-grade assessments. We plan to replace those assessments with a balanced assessment system that will be delivered electronically through a learner management system.

The balanced assessment program will include diagnostic measures that are engaged to allow teachers to be able to target at the individual student level where that student needs to improve, but also informative benchmark assessments so that the teacher knows how to restructure instruction in that classroom to meet the needs of all of the students and ensure that every student continues to move forward.

The second area is in the area of effective teachers, leaders, and preparation programs. In addition to new content standards for students, we have new professional practice standards for all educators. What is innovative about this is that the same rubrics are applied at the practice teaching level—all the way from teachers, through principals, through sitting superintendents—get master's in school administration programs so that everyone has come to a common understanding about what effective classroom instruction looks like and how an effective school is run.

Students today are not the same students that came to school 50 years ago. These students are not content to "sit and get." They want to be engaged, and everybody in the educational system needs to understand how to impact those students. In addition to having the same standards, these folks will enjoy the same evaluation tool that we delivered electronically and also allow us at the State level to collect the data that the Federal Government now requires in terms of effective leaders and teachers.

Paired with this is a huge effort on the part of the university system that now ranks its schools of education so that their information is on the table for all to see so that we can determine where the weaknesses are and begin to improve them. Also they are releasing data that compares their preparation programs to others, such as Teach for America, teachers from out of State, so that we can learn best practices from anyone who is preparing educators.

We also have an initiative in our State for college and career readiness that Senator Hagan alluded to. We have 70 early college high schools with 2 in planning and will be effective next year. That is more than any other State in the country and, in fact, at one time, we had more than all the other States combined.

The purpose of those early college high schools is for students to graduate either with an associate's degree or with transferable credit. In addition to having the brick and mortar early college high schools, students are able to access those programs through learn and earn online so that every student in the State had the opportunity to take advantage of higher education courses while they are in high school.

We also have 44 redesign high schools in our State that are focused on the Bill and Melinda Gates small schools philosophy. You will hear something about STEM this morning from Karl Rectanus, who is here.

The General Assembly in our State has been very proactive in funding the District and School Transformation Division at the department. The purpose of that division is to work with over 150 schools across our State that are low performing. We work with them in terms of needs assessment and coaching so that we can build local capacity so that when department staff leave, the improvements do not regress.

Also, we have a new North Carolina Virtual Public School that Dr. Setser is going to talk about this morning. It has been in effect now for the past 3 years and is ranked as one of the best in the country. Paired with that is a connectivity initiative that was funded by the General Assembly to make sure that broadband Internet service went to the schoolhouse door so that all students—

Senator HAGAN. Ms. Garland, just a few more minutes.

Ms. GARLAND [continuing]. OK. Would be able to take advantage.

And finally, we have efforts underway to improve our data system in the State. We at the department now place our targets and goals online through a performance navigator so that the public will be able to judge for themselves the progress made from the public schools, as well as the Department of Public Instruction.

We feel like there is a mountain of data that we have accumulated in North Carolina over 15 years with our accountability model, that we have the data to make good decisions. And if we will have the courage to make those hard decisions, we know how to improve outcomes for North Carolina students.

[The prepared statement of Ms. Garland follows:]

PREPARED STATEMENT OF REBECCA GARLAND, ED.D.

Good morning, Senator Hagan. Thank you for inviting me to testify about **educational innovation in North Carolina**. On behalf of our 1.5 million North Carolina public school students, I would like to thank you for your support of public education in the U.S. Senate as well as your previous support while you were a member of our North Carolina General Assembly.

In August 2006, the North Carolina State Board of Education adopted a visionary, ambitious strategic plan for changing public education. That plan continues to serve as the framework for major efforts in five broad areas—Globally Competitive Students (standards and assessments), 21st Century Professionals (effective teachers, leaders, and preparation programs), Healthy and Responsible Students, (child nutrition and healthy life style), Innovation in Schools (seamless education to post-secondary, charter schools, and redesign high schools) and 21st Century Systems (data

systems, turnaround processes for low-performing schools, and virtual education).  
*See Attachment—Future-Ready Students for the 21st Century.*

Each of the four required pillars found in the components of the *Race to the Top* proposal were already identified in 2006 by the NC State Board of Education as areas in which North Carolina needed major overhaul and innovative practices. Using the Board's vision as a foundation, the North Carolina Department of Public Instruction, the University of North Carolina System, and the North Carolina Community College System have worked seamlessly to introduce new initiatives that will ultimately result in improved outcomes for North Carolina students. Governor Beverly Perdue, who was a member of the State Board of Education in 2006 by virtue of her role as Lieutenant Governor, was the impetus for the Board's strategic plan. Then Lieutenant Governor Perdue spearheaded the creation of the North Carolina Virtual Public School. Since assuming her current position, Governor Perdue endorsed continuation of the major programs initiated under the strategic plan. She has also enhanced those reform efforts with her **Ready, Set, Go** agenda, focusing efforts to ensure that all North Carolina students graduate from high school, college and career ready.

While North Carolina has many innovative programs underway, I will focus on a few. We like to think of most of our programs as Second Generation. For the past 15 years, North Carolina has led the Nation in accountability, support for low-performing schools, and National Board certification for teachers. By using lessons learned from earlier work, we feel that our next generation of work allows us to stand on the foundation of solid evidence of what does and doesn't work in our State.

#### STANDARDS AND ASSESSMENTS

Even before the Common Core Content standards work began, the North Carolina Department of Public Instruction began rewriting the entire North Carolina Standard Course of Study with an eye toward fewer and more transparent standards based on 21st century knowledge and skills. Along with a new Standard Course of Study, North Carolina is rewriting its whole series of End-of-Grade and End-of-Course assessments, paired with a balanced assessment system that will include diagnostic measures for the individual student as well as formative and benchmark tools for the teacher to adjust instruction. The assessments will be delivered online through a Learner Management System that will house curriculum and instructional tools for the teacher and learning activities and resources for the student. The assessments will include scenario-based performance tasks as well as more traditional items. North Carolina had a timeline in place for such a tool before the multi-state assessment consortia were formed and before the economic decline. By joining in a multi-state group, North Carolina hopes to be able to move toward such a system in a shorter timeframe with the benefit of Federal grant resources.

#### EFFECTIVE TEACHERS, LEADERS, AND PREPARATION PROGRAMS

In addition to new content standards, North Carolina educators have new professional practice standards written to address 21st century knowledge and skills and a new generation of students who expect schooling to be more than "sit and get." The new Educator Evaluation System, required for all teachers and principals in the State, includes evaluation instruments for superintendents and central office staff, principals, teachers, and participants in teacher and school leader preparation programs. All of the instruments are aligned so that teachers in pre-service through sitting superintendents have the same expectations of what makes effective instruction and schooling. As a result of new standards, all of the pre-service programs at the public and private institutions of higher education are being revised and will be submitted to the North Carolina State Board of Education for approval.

In addition to revising educational programs at all levels, the University of North Carolina System has undertaken an ambitious effort to evaluate and improve its preparation programs. In one recent study UNC ranked its teacher preparation programs in terms of student performance in public school classrooms. Another study using public school student performance data compared graduates from UNC programs with teachers prepared from other sources such as out-of-state, Teach for America, and private institutions. The UNC System is committed to using data to improve its preparation of education professionals.

Both the evaluation system and the redesign of preparation programs are targeted at improved student performance. North Carolina has also approved alternative pathways to teacher and principal licensure and is currently investigating additional alternative programs. In North Carolina, educational leaders in K-12 and post-secondary are tightly focused on providing every student in our State with an

effective teacher and school leader regardless of the zip code in which the student resides.

#### COLLEGE AND CAREER READY

North Carolina is committed to high school reform and to increasing the number of students who attend post-secondary school. In order to encourage first generation college attendance, North Carolina funds 70 Early College High Schools, with two more funded and in planning—the most of any other State. The Early Colleges are a cooperative effort between K–12 public school systems and the University of North Carolina campuses, the Community College campuses, and the Independent Colleges and Universities in North Carolina. The goal for the students is to graduate from high school in 5 years with a high school diploma, as well as an Associate's Degree or transferable college credit that will be accepted by the University of North Carolina System and by many of the private institutions. Tuition and textbooks are provided by the State. Preference for entrance is given to first-generation college students. Early data indicate higher graduation rates at the Early Colleges—typically in the 90 percent range, as well as students who report favorably on their experiences on the campuses.

North Carolina also has 44 redesign high schools that have been restructured around the small schools model. Many of the schools have adopted a STEM (Science, Technology, Engineering, and Math) focus. All students are enrolled in rigorous college preparatory courses. The Bill and Melinda Gates Foundation has been instrumental in this initiative.

#### EFFECTIVE SCHOOLS

The North Carolina General Assembly funds the District and School Transformation Division at the Department of Public Instruction in order to ensure that students in all North Carolina public schools get a sound education. Currently the Division works with over 150 schools. Schools are selected based on several directives—the NC Court System through the Leandro Hearings, the Governor's List for high schools targeting those under 60 percent proficiency, Title 1 Improvement sanctions, the ABCs of Public Education sanctions, five DPI–LEA partnerships for comprehensive improvement, and one school system takeover initiative. In all of the schools, teachers receive additional support from ongoing instructional facilitators, principals receive assistance through ongoing coaching and needs assessments, and in six systems, the superintendent and central office personnel are paired with full-time leadership coaches. In all instances the model is based on building local capacity for continuous improvement. After 2 years of implementation, the majority of targeted schools have posted significant student achievement gains.

#### THE NORTH CAROLINA VIRTUAL PUBLIC SCHOOL (NCVPS)

The NCVPS is ranked as one of the best in the Nation. You will be receiving comments from Dr. Bryan Setser, the director of the program. The NCVPS has been made more effective because of the North Carolina Connectivity initiative in which the State has assumed responsibility for providing connectivity to each school in North Carolina.

#### TRANSPARENT, DATA-DRIVEN SYSTEMS APPROACH

In all of the initiatives outlined above, staff members at the Department of Public Instruction are working using data, planning strategically, and soliciting input from stakeholders through a transparent process. Programs are evidenced-based using North Carolina data and lessons learned from past experiences. As data-systems improve, program selection and outcomes for students will improve. The Department tracks its own performance using a Performance Navigator that is open to public view and scrutiny. North Carolina is committed to data and innovation as the drivers for a more effective and efficient educational system.

Thank you for allowing me to share some of our innovative practices.

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#### ATTACHMENT—FUTURE-READY STUDENTS: GOALS FOR THE 21ST CENTURY

The guiding mission of the North Carolina State Board of Education is that every public school student will graduate from high school, globally competitive for work and post-secondary education and prepared for life in the 21st century.



## NC PUBLIC SCHOOLS WILL PRODUCE GLOBALLY COMPETITIVE STUDENTS

Every student excels in rigorous and relevant core curriculum that reflects what students need to know and demonstrate in a global 21st Century environment, including a mastery of languages, an appreciation of the arts and competencies in the use of technology.

- Every student's achievement is measured with an assessment system that informs instruction and evaluates knowledge, skills, performance and dispositions needed in the 21st Century.
- Every student will be enrolled in a course of study designed to prepare them to stay ahead of international competition.
- Every student uses technology to access and demonstrate new knowledge and skills that will be needed as a lifelong learner to be competitive in a constantly changing international environment.
- Every student has the opportunity to graduate from high school with an Associate's Degree or college transfer credit.

## NC PUBLIC SCHOOLS WILL BE LED BY 21ST CENTURY PROFESSIONALS

- Every teacher will have the skills to deliver 21st Century content in a 21st Century context with 21st Century tools and technology that guarantees student learning.
- Every teacher and administrator will use a 21st Century assessment system to inform instruction and measure 21st Century knowledge, skills, performance and dispositions.
- Every education professional will receive preparation in the interconnectedness of the world with knowledge and skills, including language study.
- Every education professional will have 21st Century preparation and access to ongoing, high quality professional development aligned with State Board of Education priorities.
- Every educational professional uses data to inform decisions.

## NC PUBLIC SCHOOL STUDENTS WILL BE HEALTHY AND RESPONSIBLE

- Every learning environment will be inviting, respectful, supportive, inclusive and flexible for student success.
- Every school provides an environment in which each child has positive, nurturing relationships with caring adults.
- Every school promotes a healthy, active lifestyle where students are encouraged to make responsible choices.
- Every school focuses on developing strong student character, personal responsibility and community/world involvement.
- Every school reflects a culture of learning that empowers and prepares students to be life-long learners.

## LEADERSHIP WILL GUIDE INNOVATION IN NC PUBLIC SCHOOLS

- School professionals will collaborate with national and international partners to discover innovative transformational strategies that will facilitate change, remove barriers for 21st Century learning and understand global connections.
- School leaders will create a culture that embraces change and promotes dynamic, continuous improvement.
- Educational professionals will make decisions in collaboration with parents, students, businesses, education institutions, and faith-based and other community and civic organizations to impact student success.
- Public school professionals will collaborate with community colleges and public and private universities and colleges to provide enhanced educational opportunities for students.

## NC PUBLIC SCHOOLS WILL BE GOVERNED AND SUPPORTED BY 21ST CENTURY SYSTEMS

- Processes are in place for financial planning and budgeting that focus on resource attainment and alignment with priorities to maximize student achievement.
- Twenty-first century technology and learning tools are available and are supported by school facilities that have the capacity for 21st Century learning.
- Information and fiscal accountability systems are capable of collecting relevant data and reporting strategic and operational results.
- Procedures are in place to support and sanction schools that are not meeting State standards for student achievement.

Senator HAGAN. Ms. Clark.

**STATEMENT OF ANN BLAKENEY CLARK, CHIEF ACADEMIC OFFICER, CHARLOTTE-MECKLENBURG SCHOOLS, CHARLOTTE, NC**

Ms. CLARK. Good morning, Senator Hagan. Thank you for the opportunity to tell you and your colleagues about some of the innovative work we are doing in Charlotte-Mecklenburg schools, including the great work being done here at E. E. Waddell High School under the leadership of Lisa Bowen and her team of teachers.

I would like to tell you very briefly about three important initiatives now under way in CMS—strategic staffing, measuring teacher effectiveness, and pay for performance are three CMS initiatives intended to increase the performance of teachers, principals, and district employees on our way to our implementation of our strategic plan, “Teaching Our Way to the Top.”

The strategic staffing initiative began in the 2007–2008 school year with 7 schools and has increased each year to a total today of 20 schools. As of the 2009–2010 school year, we have put in place at 20 of our most academically challenged schools some of our most successful principals and teachers into these struggling schools. The results have been remarkable with student achievement in some schools increasing by more than 20 percent on State tests in just 1 year.

Strategic staffing has five tenets. A great leader is needed, a principal with a proven track record of success in increasing student achievement. Also, great teachers will not go to a troubled school without a great leader as a principal.

A team with a track record of success needs to go to the school so a person is not alone in taking on this challenging assignment. There is strength and support in numbers. Staff members who are not supportive of reform need to be removed from the school.

Principals must be given the time and authority to reform the school and be freed from the district list of “non-negotiables that constrain principal autonomy and flexibility. Not all job assignments are equal in difficulty, and compensation should be varied to match.

Academic performance as measured by proficiency on State tests has risen at nearly every school where we have employed strategic staffing. Leadership at a school matters because the principal is the key lever for change. With the right principal and a strong core team of effective teachers in place, achievement rises and the school improves in other ways as well.

For teacher effectiveness and for pay for performance, we again would believe that every child deserves an effective teacher. Great teaching lifts every child in a classroom. And when that happens, student achievement goes up. We are reshaping the way we train, evaluate, and compensate our teachers. This is a very broad-based reform initiative that is being launched in multiple ways.

We began this work 2 years ago with the Department of Education Teacher Incentive Fund Leadership for Educators’ Advanced Performance initiative that is helping us pilot measures of teacher effectiveness using student learning objectives as a measure. We have been invited to take part in a national 2-year study to measure effective teaching funded by the Bill and Melinda Gates Foundation.

The Strategic Data Project at Harvard has done another study of CMS that is the most in-depth research done on our teachers to date. Using student performance to measure teacher effectiveness, this study found very little correlation between teacher effectiveness as measured by student performance and advanced degrees.

Some positive effects were detected for teachers with national board certification. Other factors affecting teacher performance that were evaluated by the study included which undergraduate institution the teacher attended and whether a teacher was hired late after the school year began.

The study also found that nearly all of the improvement that occurs as teachers gain experience comes in the first 3 years of teaching. Therefore, we are focused on managing teacher performance by evaluating them based on student learning rather than choosing them based on experience or degrees. We are beginning with teachers, but ultimately, all employees in the Charlotte-Mecklenburg schools will be managed using pay for performance.

We will develop a system of multiple indicators of effectiveness for each job in this district and use it to measure and compensate all employees. We also will be submitting an alternative compensation plan to the Department of Public Instruction and our legislative body as a potential to inform the work across the State.

Thank you.

[The prepared statement of Ms. Clark follows:]

#### PREPARED STATEMENT OF ANN BLAKENEY CLARK

Good morning, Senator Hagan. Thank you for the opportunity to tell you and your colleagues about some of the innovative work we're doing in Charlotte-Mecklenburg Schools. I'd like to tell you about three important initiatives now underway in CMS.

All three of the initiatives are focused on improving the performance of adults, rather than children. That's deliberate. We know that if our teachers, principals and administrators do a great job, then our students will achieve more. Every student can learn—as educators, we know that. We just have to do a better job of teaching every student. Strategic Staffing, Measuring Teacher Effectiveness and Pay for Performance are three CMS initiatives intended to increase the performance of teachers, principals and district employees.

#### STRATEGIC STAFFING

The Strategic Staffing initiative began in the 2007–2008 school year with seven schools and has increased each year. As of the 2009–2010 school year, we have put it into place at 20 of our most academically challenged schools. Without intervention, any underperforming school can find itself trapped in a cycle of failure: Ineffective teachers and weak administrators lead to poor academic performance, which makes the school unattractive to the successful teachers and strong principals who could improve it. With the same staff and the same problems year after year, poor results become the norm—and a culture of failure takes root.

Strategic Staffing addresses this challenge by putting some of our most successful principals and teachers into some of our most struggling schools. The results have been remarkable, with student achievement in some schools increasing by more than 20 percentage points on State tests in a year. Strategic Staffing is based on five tenets:

- A great leader is needed, a principal with a proven track record of success in increasing student achievement. Also, great teachers will not go to a troubled school without a great leader as principal.
- A team with a track record of success needs to go to the school so a person is not alone in taking on this challenging assignment; there is strength and support in numbers.
- Staff members who are not supportive of reform need to be removed from the school.

- Principals must be given the time and authority to reform the school, and be freed from the district list of “non-negotiables” that constrain autonomy.
- Not all job assignments are equal in difficulty and compensation should be varied to match.

Let me tell you about one school in CMS that has benefited from Strategic Staffing: Sterling Elementary. At the end of 2008, student performance on State tests had fallen dramatically over the preceding 2 years. By 2008, only 29 percent of students had tested at proficient or above in both reading and math compared to 52 percent in 2006. Sterling also had enrollment challenges. Nearly 90 percent of students were categorized as economically disadvantaged and Sterling’s students with limited english proficiency were increasing. Furthermore, surveys showed the school’s teachers were becoming increasingly unhappy with their jobs and with the school.

A year later—in spring 2009—the picture was very different. Sterling was moving in a new direction. The percentage of students scoring at proficient or above on EOG tests had risen dramatically, far exceeding average district increases in math and reading: a 23 percent jump in math and a 14 percent jump in reading (without re-testing). The school had become orderly, with smooth transitions between classrooms and sparkling facilities. Teachers tracked student progress and sent reports to parents, and the teachers were using twice-weekly, 90-minute planning periods to write common assessments, review data, and discuss what needed to be done to help students achieve even more.

As Sterling Elementary shows, Strategic Staffing can turn a struggling school around. Academic performance, as measured by proficiency on State tests, has risen at nearly every school where we have employed it. Leadership at a school matters because the principal is the key lever for change. With the right principal and a strong core team in place, achievement rises and the school improves in other ways as well.

#### MEASURING EFFECTIVE TEACHING/PAY FOR PERFORMANCE

For too long, many people have casually assumed that teaching can be done by anyone willing to assemble a lesson plan and show up in class. The truth is, it can’t. Great teachers bring enormous amounts of skill and heart to the job. Not everyone has the ability to be a great teacher—a point once made by the great violinist Jascha Heifetz. After a brilliant career playing the violin, Heifetz took a job as professor of music at UCLA. Someone asked him what had prompted his move to teaching, and he replied, “Violin-playing is a perishable art. It must be passed on as a personal skill. Otherwise it is lost. I remember my old violin professor in Russia. He said that someday I would be good enough to teach.”

At CMS, we believe that every child deserves a teacher who is good enough to teach. Every child deserves an effective teacher because it’s so directly linked to achievement: The most important school-based factor in student learning is the classroom teacher. Great teaching doesn’t benefit just one group or one kind of student. Great teaching lifts every child in a classroom—and when that happens, student achievement goes up.

So CMS is working to recruit and retain great teachers by reshaping the way we train, evaluate and compensate our teachers. This is a very broad-based reform initiative that is being launched in multiple ways.

We began this work 2 years ago with a Teacher Incentive Fund-Leadership for Educators’ Advanced Performance initiative that is helping us pilot measures of teaching effectiveness using student learning objectives as a measure. CMS has also partnered with nearby Davidson College and the University of North Carolina at Charlotte to create a Charlotte Teachers Institute, which will train CMS teachers in scholarly content using the Yale National Initiative as a model. In addition, we have been invited to take part in a national 2-year study to measure effective teaching funded by the Bill & Melinda Gates Foundation. That study, which will look at several districts across the United States, is part of the Gates-funded Strategic Data Project at Harvard, a national education initiative to help education leaders use data effectively to improve instruction and increase student achievement.

CMS is the focus of another study by the Strategic Data Project that is the most in-depth research done on our teachers to date. The Center for Education Policy Research at Harvard, led by Dr. Jon Fullerton, examined teacher performance in the district as well as recruitment, retention, development and credentials. The study used results in reading and math for grades four through eight for the period from 2003–2009, and it found very little correlation between teacher effectiveness, as measured by student performance, and advanced degrees.

Some positive effects were detected for teachers with National Board certification. Other factors affecting teacher performance that were evaluated by the study included which undergraduate institution the teacher attended and whether a teacher was hired late (after the school year began). The study also found that nearly all of the improvement that occurs as teachers gain experience comes in the first 3 years of teaching. It also found that how a teacher enters the profession makes little difference in performance after 5 years—non-traditional routes to certification do not affect performance.

At CMS, we are finding that great teachers are diverse. They come in all shapes and sizes. Some have master's degrees. Some don't. Some have National Board certification. Some don't. Some are veterans. Some are in the second or third year of teaching.

That diversity makes it impossible for us to accurately predict who's going to be a great teacher and who isn't. But we are learning what is not an accurate predictor: National research and research done by Harvard on CMS in particular shows that degrees and experience are not predictors of teaching excellence.

Therefore we are focusing on managing teachers' performance by evaluating them based on student learning. Pay for performance allows teachers to set high goals and be promptly rewarded for attaining them. This is a more equitable system than seniority or degree-based compensation because it is focused on student outcomes. What matters most is how well the student is educated, not the teacher!

For teachers, pay for performance is actually a five-part plan. The five parts are:

- Define it: Clearly define and measure teacher effectiveness.
- Hire it: Base teacher recruitment on effectiveness.
- Develop it: Provide access to training to help teachers improve.
- Manage it: Provide accurate, timely and relevant data on teacher performance.
- Pay for it: Revise the compensation structure so it is aligned with performance.

Standards of effective teaching must be based on effectiveness in the classroom and student outcomes—how much students learn. We are using five core principles in the development of standards to measure effective teaching: We will work with our employees on this new way to measure performance. We will approach this work in a thoughtful, deliberate way. We will be truthful and transparent about this work. We will communicate clearly and regularly about this work. We are going to be innovative and creative, and we will resist false either-or choices.

We are beginning with teachers, but ultimately, all employees in CMS will be managed using pay for performance. We will develop a system of multiple indicators of effectiveness for each job in the district and use it to measure and compensate all employees.

Senator HAGAN. Thank you, Ms. Clark.  
Dr. Ar buckle.

**STATEMENT OF MARGARET BOURDEAUX ARBUCKLE, Ph.D.,  
EXECUTIVE DIRECTOR, GUILFORD EDUCATION ALLIANCE,  
GREENSBORO, NC**

Mrs. ARBUCKLE. Good morning. It is a pleasure to be here and appear before this committee and be with my good friend, Senator Hagan.

Guilford County Schools has a history of innovation, having been one of the first to provide early and middle colleges offering students alternative routes to graduation. It launched the State's first in-house licensure program, and it is providing North Carolina's first comprehensive pay-for-performance model, Mission Possible.

In the 2005–2006 school year, principals who were recruiting teachers complained loudly that when they were attending teacher recruitment fairs, the schools in our district with high-needs student populations found themselves competing unsuccessfully for high-quality teachers, as new teachers preferred entering our more affluent schools. Led by the superintendent, teacher focus groups were formed and teachers were asked, "What would it take to attract you and other teachers to our high-needs schools?"

Following much discussion, several specific things were identified—strong, experienced principals; financial incentives, particularly to teach the tested subjects; performance compensation for academic results; relevant professional development with instructional coaches who are experienced master teachers; and smaller class sizes.

Using criteria of teacher turnover rates, socioeconomic levels, adequate yearly progress, and ABC growth models, schools were selected. Initially, funding for the program was found by redirecting funds, resulting in over \$2 million in local dollars to fund the four components of the program—compensation incentives, performance accountability, professional development and capacity building, and structural support for recruitment bonuses.

The outcomes for Mission Possible are well described on our Guilford County Schools Web site. But in summary, they are: the impact of Mission Possible has been great in terms of maintaining faculty within our high-needs schools; providing appropriate differentiated professional development; and improvement in school climate as measured by a special measure developed specifically for the Mission Possible schools.

However, there remains concern of whether there will be increased student achievement, a long-term, 5- to 6-year outcome. Using the ABC growth model, our students' achievement is improving, but many are not yet achieving grade-level proficiency.

There are several explanations for this at this time. Changing a school's faculty takes time in order to result in having the total number of highly qualified, course-certified teachers in all positions.

Based on the 1996 Sanders & Rivers research on impact of effective teaching on students' increased academic performance, we know that, on average, fifth grade students with highly effective teachers 3 years in a row will score 50 percentile points higher on State-level exams than their peers. But in reverse, for students who have historically had ineffective teachers, it takes years to overcome this deficit.

Students enrolled in these high-need schools have multiple issues that present high challenges to their academic success—family poverty, family illiteracy, home mobility, health, and mental health issues. These must be addressed, as well as providing the students with effective teachers.

There are many lessons learned through the process of developing and implementing Guilford County's Mission Possible initiative. The attraction of subject-matter qualified teachers for our highly impacted, low-performing schools has been quite successful.

However, it is important to remind public policy makers that educational change takes time. Investment of resources, both financial and personnel, and flexibility is important.

For too long, we have had "cookie cutter" approaches to education, requiring all teachers to attend the same workshops no matter the relevance, paying teachers the same amount no matter their students' outcomes, and not recognizing that students have very differentiated needs. We must provide the support and guidance to our teachers to meet each child's individual educational needs.

[The prepared statement of Ms. Arbuckle follows:]

PREPARED STATEMENT OF MARGARET BOURDEAUX ARBUCKLE, PH.D.

Good Morning. I am Margaret Bourdeaux Arbuckle, Executive Director of Guilford Education Alliance. Guilford Education Alliance is a countywide non-profit organization whose mission is to make quality education the top priority for our community in order for every person to achieve his educational potential. We conduct research, publish reports, convene education summits and community forums on specific education issues, advocate for funding for our public schools, connect resources into classrooms, and show case schools and students through community engagement activities. We are an affiliate of the national Public Education Network and are part of a network of North Carolina community-based independent non-profit educational advocacy organizations. We work closely *with* the Guilford County Public School District but we *do not work* for the district. We support many of the District's efforts but also provide appropriate feedback to the Board of Education and the Administration when change is needed.

Guilford County Schools has a history of innovation having been among the first to provide early and middle colleges offering students alternative routes to graduation, launching the State's first in-house licensure program for alternatively certified teachers and in providing North Carolina's first comprehensive pay for performance model, Mission Possible. Additionally the school district partners with Head Start and our State Smart Start/More at Four programs to provide pre-K programs to over 70 percent of identified at-risk young children.

For background, the Guilford County School District hosts 120 schools with over 72,000 students in 67 elementary, 22 middle, and 26 high schools, 14 traditional high schools and 8 middle/early colleges, and 7 alternative schools. There are 17 magnet schools and four International Baccalaureate high schools. Guilford County had three schools with 100 percent graduation and three with 95 percent graduation last school year. Guilford County Schools is the largest employer in the region with close to 10,000 employees.

But also, Guilford County Schools hosts 10 of the 75 low-performing schools in our State, representative of all levels. This year the percentage of students on Free/Reduced Lunch has grown to over 53 percent and there are over 150 languages/dialects spoken in our students' homes representative of over 142 different cultural/ethnic groups.

To address these many challenges, particularly those within our low-performing/high-need schools, the district initiated a focused pay-for-performance model several years ago. This morning I will discuss Mission Possible, the pay for performance model with you.

During the 2005–2006 school year, principals recruiting teachers complained loudly that when attending teacher recruitment fairs, the schools in our district with high-needs student populations found themselves competing unsuccessfully for teachers as new teachers preferred entering our more affluent schools. In particular, teacher applications to teach mathematics was at a very low number and the teacher turnover at our high-needs schools was very great. It was challenging to place an experienced principal at these schools and thus many had young inexperienced leaders.

Led by the Superintendent, teacher focus groups were formed and teachers were asked, "What would it take to attract you and other teachers to our high-needs schools?" Following much discussion, several specific things were identified: (1) strong experienced principals, (2) financial incentives, particularly to teach the End of Grade-tested subjects, English and math, (3) performance compensation for academic results, (4) relevant professional development with instructional coaches who were experienced master teachers, and (5) smaller class sizes.

Historically North Carolina teachers have been paid on the basis of academic degrees earned and longevity/experience in the position; this was true for all Guilford County teachers. Also, the staff development program was expansive but was workshop oriented with everyone's participation expected. Class sizes varied upon grade level but generally the high-need schools did not have surrogate Gifted/Talented teachers that provided for an overall lower teacher/student ratio.

Having the ideas from the teacher focus groups, the Superintendent put the idea of differentiated pay "on the table" for discussion in the community. Immediately there was press attention to it and great interest in the idea. Following rather heated discussion with the teachers' organization which resulted in the question being posed, "what would you propose to recruit and retain teachers in our high-poverty schools?" which resulted in silence as the response, conversations with the business community, leadership of Guilford Education Alliance and others, the Super-

intendent proposed to the Board of Education in the spring of 2006 the funding of the Mission Possible program for 20 selected schools.

Using criteria of teacher turnover rates, socioeconomic levels, Adequate Yearly Progress (AYP) and ABC growth models, schools were selected. Initially the funding for the program was found by redirecting funds through raising the class size in the fifth grade by .5 student/class and not filling 30 vacant teaching positions resulting in \$2,073,624 in local dollars to fund the four components of the program: Compensation Incentives, Performance Accountability, Professional Development and Capacity Building, and Structural Support.

In today's discussion about School Reform initiatives, differentiated compensation has gained momentum but in 2006 this was seen as a very innovative, all but radical, proposal, particularly in North Carolina where teacher pay had such a long history of its being based on experience. Teachers joined the workforce making approximately \$32,000/year and after 10 years of experience made about \$8,000 more, including local pay supplements. Therefore to consider teachers being offered incentive pay to teach in specific schools and provided compensation for student performance created much attention.

After the initial implementation, the UNC Administration and the local foundation community offered to expand the program with specific focus on teaching mathematics in high schools. Through the private funding, high school math teachers were provided a laptop, classroom technology, math coaching, summer institutes and an additional \$4,000 stipend for attending the training programs. Following this implementation, Guilford County Schools became the first district to receive a Federal Teacher Incentive Fund grant of \$8 million to differentiate teacher salaries. These additional dollars resulted in 30 Mission Possible Schools identified for the 2007–2008 School Year and continuing henceforth.

Agreed upon pay incentives are based on value-added scores for student academic performance. Teachers who produce gains of 1.0–1.49 above the district value-added mean receive a bonus of \$2,500 and those who produce gains of 1.5 or more above the mean receive \$4,000.

#### Recruitment/Retention Incentives

Position	Incentive
K–5 .....	\$2,500
6–8 Language Arts or Reading .....	\$2,500
6–12 Math without a math degree or 24 content hours (C or above) .....	\$2,500
6–12 Math with a math degree or 24 content hours (C or above) .....	\$9,000
Algebra I .....	\$10,000
English I .....	\$2,500
Elementary Principal .....	\$5,000
Middle School Principal .....	\$7,500
High School Principal .....	\$10,000

#### Performance Incentives

Position	Level I (>1.0 SE)	Level II (>1.5 SE)
K–2 .....	Not Eligible	Not Eligible
3–5 Composite EOG .....	\$2,500	\$4,000
6–8 LA/Reading .....	\$2,500	\$4,000
6–12 Math .....	\$2,500	\$4,000
Algebra I .....	\$2,500	\$4,000
English I .....	\$2,500	\$4,000

#### Performance Incentives

Position	Level I (>50%)	School Makes AYP	Level II (>75%)
IB and AP Math .....	\$2,500		\$4,000
Principal .....		\$5,000	
Curriculum Facilitator .....		\$2,500	



The Outcomes for Mission Possible have been published on the Guilford County Schools Web site, [www.gcsnc.com/depts.mission\\_possible](http://www.gcsnc.com/depts.mission_possible). In summary they are:

- For all 3 years of implementation, 100 percent of Mission Possible Positions were staffed on the first day of school.
- The quality of the applicants for the teaching positions are more experienced and more qualified, licensed in English or Math.
- Professional Development participation has been 100 percent Year 1, 99 percent year 2, and 95 percent Year 3 with evaluations of over 4.5 on a 1–5 point Likert Scale.
- The Professional Development has been differentiated per teacher need.
- From 2006–2007 to 2008–2009 school years, a total of \$1,017,710 has been awarded for Value-Added Performance Awards representing from 13 percent to 75 percent of teachers for each course measured, depending upon the course/level.
- There is a shift in the population of teachers who are receiving Level I value-added bonuses to increasing numbers receiving Level II value-added bonuses.
- All but two of the schools received Performance Awards.
- The Faculty Attrition Data was 11.7 percent as compared to 12.8 percent for the District average.

The impact of Mission Possible has been great in terms of maintaining faculty within high-needs schools, providing appropriate differentiated professional development and improvement in School Climate as measured by a School Climate Indicator developed specifically for Mission Possible Schools.

However, there remains concern in whether there will be Increased Student Achievement, a Long Term (5–6 year) Outcome. Using the ABC Growth Model our students' achievement is improving but many are not achieving grade level proficiency. There are several explanations for why this is so at this time:

1. Changing the faculty takes time in order to result in having the total number of highly qualified, course-certified teachers in all positions. For example, there can be 85 faculty members in a middle school and 4–5 of these positions change in a given year. It takes multiple years to replace all of the faculty.
2. Based on the 1966 Sanders & Rivers research on impact of effective teachers on students increased academic performance, we know that on average 5th grade students with highly effective teachers 3 years in a row will score 50 percentile points higher on State-level exams than their peers. But in reverse, students who have historically had ineffective teachers, it takes years to overcome this deficit.
3. Students enrolled in these high need schools have multiple issues that present high challenges to their academic success: family poverty, family illiteracy, home mobility, health and mental health issues. These must be addressed as well as providing the students with effective teachers.

There are many lessons learned through the process of developing and implementing Guilford County's Mission Possible Initiative. The attraction of subject-matter qualified teachers for our highly impacted, low-performing schools has been quite successful. However, it is important to remind public policymakers that educational change takes time, investment of resources both financial and personnel, and that flexibility is important. For too long, we have had "cookie cutter" approaches to education, requiring all teachers to attend the same workshops no matter the relevance, paying teachers the same amount no matter their students' outcomes, and recognizing that students have very differentiated needs. We must provide the support and guidance to our teachers to meet each child's educational needs.

Senator HAGAN. Thank you very much.  
Dr. Setser.

**STATEMENT OF BRYAN SETSER, EXECUTIVE DIRECTOR,  
NORTH CAROLINA VIRTUAL PUBLIC SCHOOLS, RALEIGH, NC**

Mr. SETSER. Thank you, Senator Hagan, for the opportunity for the North Carolina Virtual Public School to attend today and share our good news in North Carolina, as well as nationally.

In the year 2000, the Florida Virtual School launched as the Nation's first virtual school. Today, there are now over 42 virtual schools in this country. Your North Carolina virtual school ranks in the top five in all metrics, including enrollment, where we are second.

In the year 2000, there were 40,000 students nationwide taking virtual courses. Today, there are over 2.7 million. If you look to any expert in the field, including the recent U.S. Department of Education's meta analysis of over 50 online learning studies, half of all students will learn online in 2020.

So when we look at those types of metrics, what does that mean for service options in our States and for our parents, our students, and educators? What does it mean in terms of learning options and one-to-one laptops, one-to-one iPads, or one-to-one mobile devices?

Several things are brought to mind in terms of innovation with where we are. Online learning in the K-12 space is over 10 years old. That means that simply taking a course on the Internet is now a classic model. But yet, when we look at penetration across North Carolina or across the Nation, less than 1 percent of the students are still meeting this metric.

That means that if you go across North Carolina, some districts have 1,000 students enrolled and some districts have 15. Yet 75 percent is the enrollment rate per semester in terms of growth. So as schools look at these service options across how they will deliver training to principals, superintendents, counselors, teachers, and how they will provide this access to students, four service options are emerging for us all to think about.

Every school in 2020 will have a classic online learning option. They will have courses accessed before school and after school. In that same year, in 2020, every school will have a modular application. What that means is students can be diagnosed, assessed, and just take a portion of the course they missed.

Every school most likely will have a mobile option, where they will be accessing content, as they are in Arizona and Alabama, on school buses before school and after school, giving feedback once they arrive at the schoolhouse and then disseminating those devices again as they leave it.

And finally, we will all search for ways to blend those components. We are not advocating in North Carolina nor nationally that every student learns online the best or every student learns in a face-to-face situation the best. The final service option is blended. We need to look for ways for teachers, educators, leaders, and students to access online content anytime, anywhere, any path, or any pace.

To create such an environment, you have heard from many of our panelists who are talking about Innovation 3 funding, which we are very appreciative of Ms. Shah and the Department of Education in looking at ways for programs like ourselves to participate in that national letter of intent, and also for ways for us to train teachers and leaders across States in these endeavors.

I think when you hear from Dr. Garland today and the work around diagnostic testing and everything being offered on a State-wide learning management system, one of the reasons that the 2020 vision is very critical is that students want to learn this way. When they arrive at school, they are asked to power down, to cut off their devices. But that is not the case in Onslow County or Durham County, where students are using smart phones to access Algebra I content, and results are up 14 percent on all State metrics.

So as we look to comprehensively plan, we need to stop referring to technology as a tool. Technology is now a strategic learning process, and every school district, every school should sit down and think of ways for that delivery system to continue to engage children, to continue to engage the parents, and to connect to a learning management system that can produce results.

As I close my comments today, those results are very strong, that U.S. DOE analysis in 2009 concluded that online learning on all metrics was as good or better than face-to-face, particularly when partnering with blended instructors, when partnering with blended leadership and blended counselors. In North Carolina, since 2007, our metrics started out in the mid-50 percent range. They are now in the 85 percent range in student performance, as well as a 97 percent completion rate.

As we look at these options, the question is not whether or not we have a crisis of how to use technology. The question is do we have a crisis in leadership and execution in terms of how we deploy that technology?

As we roll out the North Carolina virtual learning plan for this year, we are partnering with school districts. We are partnering with national initiatives to bring even more access to students, and I think you will see a day when this type of repository of information is accessible anytime, anywhere, to any parent, any student, and they can make more informed choices about their learning.

[The prepared statement of Mr. Setser follows:]

PREPARED STATEMENT OF BRYAN SETSER

NCVPS is honored to be a part of Senator Hagan's Field Committee Hearing on "Fostering Innovation in Education." Our testimony today in the North Carolina innovation space includes a description of NCVPS, statutory requirements, services, and results for North Carolina students, educators, and citizens. Our national reputation is among the Top 5 virtual schools in the country, yet our usage level in North Carolina is still less than 1 percent of the total student population, and this is with a growth rate of 75 percent enrollment per semester. Since 2007, we have served over 65,000 North Carolina students and propelled over 9,300 to receive free college credit while in high school.

However, as many students and parents find out at their local school sites, access to our courses often contains barriers. This is why hearings like today are vital. Our students are in a supplemental program to the public schools. We offer 77 general courses, 21 advanced placement courses, 10 credit recovery courses, and courses for middle school students seeking high school credit. In some districts, we have over 1,000 participants, and in some districts less than 14. Why the disparity? Leadership, education, and execution.

Our students can take courses anytime, anywhere, any path, and any pace. In school districts where the partnerships are strong they take these courses before and/or after school, during school, and/or at community centers or on vacation. Our model is portable and goes with the learner. So there really is no reason to not take advantage of NCVPS.

Through our Getting Organized to Lead Virtual Education effort or GO LIVE site we are taking all of these barriers out of the mix. Use the site today: <http://sites.google.com/site/ncvpsgolive/> or craft notes from this testimony as we are here to provide all of North Carolina students with world class blended learning opportunities to become the globally competitive learners and leaders of tomorrow.

Senator HAGAN. Thank you.

Mr. Rectanus.

**STATEMENT OF KARL RECTANUS, LEADER, NC STEM  
COMMUNITY COLLABORATIVE, DURHAM, NC**

Mr. RECTANUS. Thank you, Senator Hagan, for your leadership and for holding this hearing in a State that has been dedicated to innovation since even before the Wright brothers took their first flight on the coast.

I want to acknowledge the efforts of the leaders here. I would also like to briefly acknowledge the wonderful educator Jessica Garner, who is our North Carolina Teacher of the Year from Union County, who has also joined us.

Education is not simply about teaching and learning and graduation. It is the basis for economic prosperity. Education should be equitable so that all have the opportunity to be informed citizens and can thrive economically and civically in our now global environment. In fact, the Governor's college and career Ready, Set, Go, as well as the Lieutenant Governor's Joining Our Business and Schools Commission, has been driving this message across the State.

Increasingly, however, our education system in the United States is not meeting our needs for informed science, technology, engineering, and math-trained students. Everyone needs some basics of STEM literacy to function in today's world. Every single major challenge this country faces will be affected and impacted, and we will need STEM skills to solve it.

In addition, our need for STEM-skilled workers has never been greater. This is not merely about doctors and researchers, but about the majority of jobs. The Kauffman Foundation research shows that 62 percent of our jobs in 2007 required STEM skills, and only 21 percent of our students had the requisite skills to meet those.

In fact, I would argue that the best economic stimulus we could possibly have is an educated child. It will take all of us working together to address that challenge, and I applaud your recognition that we have to prepare our children for the world they live in, not just the world we came from.

To do this, we need to take new approaches, but base them on proven practices. I have the honor of leading the North Carolina STEM Community Collaborative, which is developing a State-wide network of communities and access to drive education innovation further faster. NC STEM is housed at MCNC and has the support of nationally recognized innovators like the Bill and Melinda Gates Foundation and the Battelle Memorial Institute.

As you know, MCNC primarily focuses on broadband needs of education and public health in the State. We appreciate that support. MCNC manages the research and education network—which was mentioned earlier, the single broadband network that all of our public schools, all of our public universities, and the majority of our private universities share to drive education innovation—and partners with education, private industry, economic development, and foundations. It is a model for public-private partnership, and NC STEM builds on this valuable State infrastructure to do three things.

First, we invest in communities, communities ready to change the way they prepare their children for their regional economic

needs. Our State's economy is transitioning from manufacturing and agricultural to one steeped in STEM skills. Whether a mechanic or a farmer or a doctor or an artist, any sector of the workforce, STEM skills are critical.

NC STEM has developed a community visioning and design process that brings systems thinking—that is a STEM approach that architects, engineers use—to communities who don't just want to do another project, but want to design education innovation that is sustainable, scalable, and serves all of the children.

In three communities, Davie County, Lenoir County, and the 11 counties around Fort Bragg, leaders and community members have been working in new ways to change teaching, learning, funding, and decisionmaking to bolster their economic strength.

In Lenoir County, they have designed what they refer to as a "STEM hub." It is a central location for experience-based learning for all teachers and students, and it is co-located with aerospace and other industry partners. In the 11 counties around Fort Bragg, they are using a distributed learning network with enhanced technology classrooms that changes teaching and learning practices across county lines with 21st century tools.

And just down the road in Davie County, they are changing the way they recruit, train, and retain teachers, teaming with business professionals and collaborating with higher education in new ways. This process has been so successful, we will extend this into a community in each of the other four economic development districts later this spring.

Second, we connect communities to the broad swath of access and resources and experts in North Carolina and other States who can best move education innovation further faster. North Carolina has a wealth of wonderful and effective programs. Our universities have created over 70 different STEM programs.

One example, the Kenan Fellows program, matches science teachers with industry and university scientists. As you mentioned, our community colleges have flexible responsiveness to our business needs, and our K-12 education industry, business, and non-profit sectors have created a multitude of impact on teaching and learning, including a perfect example, the North Carolina New Schools Project.

However, not all of these programs are equal, effective, or appropriate for every community. So we focus on ensuring that our State assets and others from around the country work together to provide children with good choices in life to bolster their economic situation.

Finally, we believe we must consider a new approach to funding education innovation. Venture philanthropy, a proven model in the public and private sector that provides an admirable approach to local capacity-building and ongoing sustainability. NC STEM and its partners recognize that networks help move innovation further faster. The iPad, iPod, Twitter, Google, Facebook are all proven private sector examples.

Our partners believe we need to take another approach from the private sector. That is venture capital. What is this venture capital and venture philanthropy for innovation? In a nutshell, it is about active investment and protecting that investment. It is about pro-

viding the support and guidance needed to take the seed of an idea and allow it to nurture to a full flower.

We aren't the first to utilize this. Obviously, business and industry, biotech and IT, have used this for years. Venture philanthropy is well documented as a valid model. New Profit, New Schools Venture Fund, which Charlotte is a part of, the Robin Hood Foundation, and others have helped prove the KIPP school model, New Leaders for New Schools, and others across the country.

This is an idea whose time has come. A STEM ventures fund would spur innovative approaches—

Senator HAGAN. Just a few more seconds.

Mr. RECTANUS [continuing]. Absolutely. And provide expertise, support, and guidance and build local capacity. It would also minimize the risk of what we do, improving opportunities.

We believe it also responds to the pace of innovation, which is what we need. The pace of legislation as well as foundation giving cycles can be added to this approach. So, in three ways, building local capacity in communities, networking those communities across the State, and investing actively in a portfolio of them, we believe we can have great impact on our children, families, and economy.

Thank you so much.

[The prepared statement of Mr. Rectanus follows:]

#### PREPARED STATEMENT OF KARL RECTANUS

Thank you, Senator Hagan for your leadership, and holding this hearing in a State that has been dedicated to innovation since well before the Wright Brothers' first flight on North Carolina's coast.

Education is not simply about teaching, learning and graduating. Education is the basis for economic prosperity. Education should be equitable so all have the opportunity to be informed citizens who can thrive economically and civically in our now global environment. Education is even a nationally security issue—an informed global citizen is much more able to interpret and contextualize global events.

Increasingly our education system in the United States does not meet our needs for informed science, technology, engineering, and math (or STEM) trained students. Everyone needs some basis of STEM literacy to function in today's world. The environment, health care innovations, and use of the Internet impacts our daily lives, and every single major challenge our country faces this century requires STEM skills to solve.

In addition, our need for STEM-skilled workers has never been greater. This is not merely about doctors and researchers, but about the majority of jobs. These are the innovation careers. And our children are the inventive minds that will meet the challenges of the 21st century with new ideas about energy, healthcare, and infrastructure. In fact, I would argue that the best economic stimulus is an educated child.

It will take all of us working together to address the challenge. I applaud your recognition of the critical need to prepare our children for the world they live in, not just the one we came from. To do this we must take new approaches, based on proven practices.

I have the honor of leading the NC STEM Community Collaborative, and I appreciate the opportunity to discuss how our State and Nation can foster education innovation. NC STEM is developing a statewide network of communities and assets who drive education innovation in STEM fields further, faster.

NC STEM is housed at MCNC, with the support of nationally recognized innovators including the Bill & Melinda Gates Foundation and the Battelle Memorial Institute. As you know, MCNC primarily focuses on supporting the broadband needs of education and public health of the State of North Carolina. MCNC manages the NC Research and Education Network (NCREN). NCREN is the single broadband network that all public schools, all public universities, the majority of the private universities all share to drive education innovation. MCNC works with education, private industry, economic development, foundations and private industry—

it is a model for public/private partnership. NC STEM builds on the valuable State infrastructure asset by doing three things.

**First, we invest in communities ready to change the way they prepare their children for their regional economic needs.** Our State's economy is transitioning from manufacturing and agriculture to one steeped in STEM skills—advanced manufacturing, aerospace, IT, health and biotech. Whether a mechanic, farmer, doctor, artist, or any other sector of our workforce, STEM skills are critical, and many communities are now willing to change the way they teach and learn to ensure their children are able to fill these roles.

NC STEM has developed a “Community Visioning & Design Process” that brings a systems-thinking—a STEM approach—to communities who don't just want to do a new project, but want to design education innovation that is sustainable, scalable, and serves all children. In three communities—Davie County, Lenoir County, and the 11 Counties around Ft Bragg—leaders and community members are working in new ways to change teaching, learning, funding, and decisionmaking to bolster the economic strength of their communities. The process has been so successful, communities in each of the other four economic development regions of the State will implement their own Community Visioning & Design Process later this spring.

**Second, we connect communities to the broad swath of assets, resources, and experts in NC and other States who can best move education innovation further faster.** North Carolina has a wealth of wonderful, effective programs that impact students. Our universities offer over 70 different STEM programs that impact K12 education—for example, the Kenan Fellows Program matching science teachers with industry and university scientists. Our community colleges have proven their flexible responsiveness to business needs. Our K12 education, business and non-profit sectors have also created a multitude of impactful teaching and learning programs; a wonderful example of this is the NC New Schools Project with redesigned high schools and STEM Schools.

However, not all programs are created equal, effective, or appropriate for all communities' needs. NC STEM focuses on ensuring that our State's assets and others from around the country work together to provide children with good choices in life and bolster the economic strength of their communities.

**Finally, we believe we must consider a new approach to funding education innovation—venture philanthropy, a proven model in the public and private sectors that provides an agile approach to local capacity building and ongoing sustainability of innovation.**

NC STEM and its partners recognize that networks help move innovation further, faster. Of course, the iPad, the iPod, Twitter, Facebook, Google and other private sector examples prove the power of networks. Our partners believe we need to take another page from private sector's efforts to spark innovation—that is, the venture capital approach to funding innovation, especially in the STEM arena.

What's the idea of the Venture Capital, or Venture Philanthropy, to drive innovation? In a nutshell, it's about active investment and protecting that investment. It's about providing the support and guidance needed to take the seed of an idea and nurture it to full flower with assistance and financial support.

We aren't the first to utilize the model. Business and industry has nurtured innovation this way with incredible results in IT, Biotech, and other industries globally, and here at home. And, Venture philanthropy is well-documented as a valid model. National leaders like New Profit Inc., the Robin Hood Foundation, New Schools Venture Fund, and others have driven great education innovations like the KIPP school model and New Leaders for New Schools in regions and across the country. Venture Philanthropy encourages a more active role in investments to push for faithful and effective implementation of good ideas.

This is an idea whose time has come. A STEMVentures Fund will:

- spur innovative approaches;
- put capital into ideas and organizations best positioned to succeed;
- provide the expertise, support, and guidance needed for effective implementation and impact;
- build local capacity while providing opportunities to scale proven practices and programs quickly;
- minimize the risk and exposure for public investment through private investment and assistance;
- support a portfolio of evidence-based innovations rather than individual point programs; and
- Leverage public investment for multiplier effect with private dollars.

This approach responds to local needs to drive innovation and innovative approaches. And it responds at the pace of innovation—not the pace of a legislative appropriation process or a foundation giving cycle.

By doing these three things—building local capacity in communities, networking their successes across the State, and actively investing in a portfolio of sustainable innovation—we believe we can ensure we support our children, our families, our economies, and our Nation to continue to lead the world.

Thank you again for your leadership, your support of STEM skills and NC's STEM economy, and your willingness to help North Carolina lead the world in education innovation.

Senator HAGAN. Thank you.

Mrs. McCray.

**STATEMENT OF MARY McCRAY, TEACHER, COMMUNITY HOUSE MIDDLE SCHOOL AND LOCAL PRESIDENT OF THE CHARLOTTE-MECKLENBURG ASSOCIATION OF EDUCATORS**

Ms. McCRAY. Good morning, Senator.

I thank you for the opportunity to give the perspective of my colleagues, who are here on the front lines of CMS every day.

Charlotte-Mecklenburg Schools lost 843 educators last year, nearly one-half of those were classroom teachers and a quarter were teacher assistants. With instructional support personnel counted, Charlotte-Mecklenburg cut 710 educators from the classroom out of 843 total cuts. That is 84 percent of all cuts coming from children's teachers and teacher assistants.

Before we talk about innovation, before we begin any discussion on experiments, Charlotte-Mecklenburg and the State of North Carolina needs to master the most elementary requirement for schools. It needs a qualified teacher standing before ready-to-learn students.

Innovators and academics can present all the studies and talk about all the new ideas at any given conference. We can create programs, we can bring in technology, and we can shift our paradigms and think outside the box. However, it always comes back to a teacher standing in the classroom, teaching children who are ready to learn.

Innovation is nothing new to schools, especially here in Charlotte-Mecklenburg. We have large numbers of students who earn college credit in high school, strategic staffing along with pay for performance in our hard-to-staff or low-performing schools. We have implemented the New Schools Project with success on the campuses of two of our high schools, and many more examples.

But the reality is that there are teachers who are teaching nearly 40 children in a classroom that only seats 30 students and has 25 textbooks. We are preparing children for universities, careers, and military service with fewer resources than we have had in a generation.

Our teachers are also innovating at home as we deal with furloughed pay, higher healthcare premiums for our children, and our North Carolina ABC pay-for-performance testing program that hasn't paid us for our successful performance in 2 years.

Please do not misunderstand me. Public schools do require innovation. In an economic climate that has left K-12 public education without the needed resources to provide a constitutionally required sound basic education, we need innovation more so now than ever.



I propose that we create a tax system in North Carolina that produces the resources required to put one teacher in front of a classroom with no more than 22 students. I propose that we transition our current tax system in North Carolina from an agrarian-based tax system to one that recognizes that we are now an economy based on services and technology, not bartering and manufacturing. Let us also create a baseline funding system for K-12 public education that recognizes the limitations of local funding capabilities.

The Federal Government can play a role in protecting the 5,500 jobs that were cut in North Carolina last year. I ask that this Administration and the Congress invest in public schools and its students during this critical time. Now is not the time to divest, privatize, or devise gimmicks.

To promote innovation in public schools, we must think beyond creating more charter schools. Charter schools are only one strategy to afford innovation in a community. Schools that have proven track records based on multiple indicators should be allowed educational flexibility to try innovative strategies.

In North Carolina, we have a variety of those innovative strategies, such as magnet programs, language immersion programs, Learn and Earn, early and middle colleges. Another innovative approach might be creating learning lab schools with universities to implement research-based innovations that impact student achievement.

Additionally, new and innovative approaches for public schools must entail reviewing the manner in which we assess students, evaluate teachers, and fund innovation. North Carolina has an edge on supporting effective educators with the principal and teachers evaluation process. This new evaluation process has created in most schools climates of collaboration, self-reflection, and professional learning communities where instruction is data-driven to maximize student success.

The evaluation of educators cannot be solely based on student test scores. There are many ways that a teacher or a principal impacts a student's growth. To elevate the most noble profession, we must have policies in place that help create more respect for educators and stop the divisive policies that create barriers from collaboration, such as merit or differentiated pay.

To be an educator, one needs to have skills as well as knowledge and training. Saying anyone can come and teach if they have the desire to make a difference does not create professional respect. The Federal Government does not need to tell States how to evaluate educators, nor does the Federal Government need to set policies on who schools should hire.

Senator HAGAN. Mrs. McCray, just a few more seconds. Thanks.

Ms. MCCRAY. As we push forward for innovation, we must remember that every child has equal rights to a quality public education, and fully funding that education is a baseline for student success.

I appreciate the opportunity to be a witness today, and I look forward to continuing this dialogue in the hopes for a better and brighter future for all of our students.

Thank you.

[The prepared statement of Ms. McCray follows:]

PREPARED STATEMENT OF MARY MCCRAY

Good morning. My name is Mary McCray. I am an elementary teacher of 5th grade here in Charlotte-Mecklenburg. I am also president of the Charlotte-Mecklenburg Association of Educators. CMAE is an affiliate of the North Carolina Association of Educators and the National Education Association.

I thank you for the opportunity to give the perspective of my colleagues, classroom teachers, who are on the front lines in CMS every day.

Charlotte-Mecklenburg Schools lost 843 educators last year, nearly  $\frac{1}{2}$  of those were classroom teachers and a quarter was teacher assistants. With instructional support personnel counted, Charlotte-Mecklenburg cut 710 educators from the classroom out of 843 total cuts. That is 84 percent of all cuts coming from children's teachers and teacher assistants.

Before we talk about innovation, before we begin any discussion on experiments, Charlotte-Mecklenburg and the State of North Carolina needs to master the most elementary requirement for schools: It needs a qualified teacher standing before ready-to-learn students. Innovators and academics can present all the studies and talk about all the new ideas at any given conference. We can create programs, we can bring in technology, and we can shift our paradigms, and think outside the box. However, it always comes back to a teacher standing in the classroom, teaching children who are ready to learn.

Innovation is nothing new to schools, especially in Charlotte-Mecklenburg. We have large numbers of students who earn college credit in high school, strategic staffing along with pay for performance in our hard to staff or low-performing schools, we've implemented the New Schools Projects with some success on the campuses of two of our high schools—that is considered "schools within a school," and many more examples. But the reality is that there are teachers who are teaching nearly 40 children in a classroom that only seats 30 students and has 25 textbooks. We are preparing children for universities, careers, and military service with fewer resources than we've had in a generation. Our teachers are also innovating at home as we deal with furloughed pay, higher health care premiums for our children, and an ABC pay-for-performance testing program that hasn't paid us for our performance in 2 years.

Please do not misunderstand me. Public schools require innovation. In an economic climate that has left K–12 public education without the needed resources to provide a constitutionally required sound basic education, we need innovation now more than ever. I propose that we create a tax system in North Carolina that produces the resources required to put 1 teacher in front of a classroom with no more than 22 students. I propose that we transition our current tax system in North Carolina from an agrarian based tax system to one that recognizes that we are an economy-based on services and technology not bartering and manufacturing. Let's also create a baseline funding system for K–12 public education that recognizes the limitations of local funding capabilities.

The Federal Government can play this important role in protecting the 5,500 education jobs that were cut in North Carolina last year. I ask that this Administration and the Congress invest in public schools and its students during this critical time. Now is not the time to divest, privatize or devise gimmicks.

To promote innovation in public schools we must think beyond creating more charter schools. Charter schools are only one strategy to afford innovation in a community. Schools that have proven track records based on multiple indicators should be allowed educational flexibility to try innovative strategies. In North Carolina we have a variety of innovative school models; magnet programs, language immersion programs, Learn and Earn, Early and Middle Colleges. Another innovative approach might be creating Learning Lab schools with Universities to implement research-based innovations that impact student achievement.

Additionally, new and innovative approaches for public schools must entail reviewing the manner in which we assess students, evaluate teachers and fund innovation.

**We must provide students ways to show what they have learned:** As ESEA is reauthorized the focus can not be on more assessments/testing, but better assessments to allow students to show they can solve problems, think creatively, and work in teams. There must be multiple ways that schools can demonstrate success. Success is not just a passing test score!

**We must Elevate the Profession:** North Carolina has an edge on supporting effective educators with the Principal and Teacher Evaluation Process. This new evaluation process has created in most schools; climates of collaboration, self reflection,

tion, and professional learning communities where instruction is data-driven to maximize student success. The evaluation of educators can not be solely based on a student test score. There are many ways that a teacher or principal impacts a student's growth. To elevate the most noble profession, we must have policies in place that help create more respect for educators and stop the divisive policies that create barriers for collaboration; such as merit or differentiated pay. To be an educator, one needs to have skills as well as knowledge and training. Saying anyone can come and teach if they have the desire to make a difference does not create professional respect. The Federal Government does not need to tell States how to evaluate educators nor does the Federal Government need to set policies on who schools should hire. Each State and each community has different needs and ONE-SIZE-DOES-NOT-FIT-ALL.

**We must Provide Equitable Access to Education:** The competitive grant process will create more have and have not schools. It is noble to provide opportunities for schools to apply for extra funds, but many schools that need extra funds will have too many barriers to access the needed funding. Before extra funds are granted, the Federal Government must fully fund Title I and IDEA programs without the current caps.

As we push forward for innovation we must remember that every child has equal rights to a quality public education and fully funding that education is a baseline for student success. I appreciate the opportunity to be a witness today and I look forward to continuing this dialogue in the hopes for a better and brighter future for all of our students.

Senator HAGAN. On behalf of all the people here testifying, I can't begin to tell you how much I appreciate what you have done for education so far, and what you will continue to do. Just the fact that you are here sharing your insight and wisdom is critical. So I do want to thank you.

When I consider the theme fostering innovation in education, I think that going forward in our country—obviously, the socioeconomic backgrounds and differences of our students is certainly something that we all must take into consideration. I also think that STEM education is going to be critical because we want these students to have careers and a college education.

When I look at what is going on in North Carolina, as we move from a manufacturing, agrarian society, driven by the aerospace industry, medical, biotech, and pharmaceuticals, clean energy manufacturing, and all of those areas, we have got to come together to teach all of that in our school systems. And I do think that online education is going to grow dramatically.

One of my own children just recently, before he went into medical school, took a couple of online science classes that he hadn't taken as an undergraduate. And I just see that just growing exponentially.

I have got questions for each and every one of you. And typically what we do in the Senate, we take rounds of questions. And since I am the only one here today, what I am going to do is just ask each one of you a question, and then if we have time, we will go back and start again.

One of the things I am focused on, being from North Carolina, is that with such a large rural population in our States, a lot of what is applied to urban areas cannot be handled the same way in our rural areas. So if you have any insight on rural education issues, I would love to hear that, too.

Ms. Shah, once again, thank you so much for coming. North Carolina enrolls more students in rural school districts than any other State in the country. At these schools, the students obviously face unique challenges. The President's blueprint for the No Child

Left Behind reauthorization states that the Secretary may reserve funds for research on innovative programs that are designed to help rural districts overcome capacity constraints.

Can you share your thoughts on the way that these innovative programs might be designed, and are there any examples that you can cite? And one other thing that none of us talked about today, too, was any sort of discipline in the schools, if that has any impact on what it is that we are talking about now, too?

Thanks.

Ms. SHAH. Thank you for that question.

We certainly recognize the unique challenges facing rural areas, and we are deeply committed to better serving rural areas. As we all know, there are more small rural communities than there are large urban ones. And given our focus on bringing funding and resources to where kids are in need and simultaneously getting the skill is critical for us to better serve rural communities.

Specifically, you asked about the Secretary's request to set aside funds for research and capacity building. So the first thing I would say is that we are requesting the authority to do so. So no funds for that would be taken from the Rural Education Achievement Program in Fiscal Year 2011, but we would hope in future years that we would have funds allocated for this purpose. And we would, hopefully, be able to use those for a range of activities, including national activities, which could very specifically be used to provide technical assistance to small rural districts to enable them to increase their capacity to access more of the competitive grant making that the department is now moving toward.

But it could also be used to support research into teacher prep and recruitment programs for rural schools, including Grow Your Own Teacher programs, which I am sure everyone here at this stage is quite familiar with. But we know there is much research out there that tell us that teachers want to teach in schools where they grew up and prefer areas like their hometowns.

And we know that in rural communities, there are many young individuals, mid-career professionals, all sorts of different people who want to go into teaching. And by leveraging partnerships with universities and some of the distance learning community that we have also talked about briefly, there are a whole range of ways that we could support activities like that that would hopefully benefit more rural communities.

I would probably stop there, but I would say between the growing your own teachers and the distance learning, those are at least two very good examples of ways that we think we can leverage what is happening across the country to better benefit rural communities.

Senator HAGAN. I think growing your own teachers in rural areas is critical, and I think we have also seen that in the medical field, as well. One of the other bills that I am working on now is the Rural Physician Act. If we can get more people to go to our rural areas to practice medicine, and become teachers, I think it would be advantageous for those rural areas.

Dr. Garland, you talked about North Carolina's commitment to high school reform and to increasing the number of students who attend post-secondary school. I know that you also know that Presi-

dent Obama and Secretary Duncan have set the goal that by 2020, the United States will once again lead the world in college completion.

To accomplish that goal, tell me what you think the value is of national or common standards, from a curriculum standpoint.

Ms. GARLAND. North Carolina has supported the notion of Common Core standards from the beginning. In fact, Governor Hunt, two Governors ago, was one of the first Governors that spoke to the need for Common Core standards.

If you will remember, I spoke about North Carolina rewriting its standard course of study. Actually, we have begun new efforts in the area of more rigorous standards, more rigorous requirements for students to graduate from high school, and we are delighted that the Common Core movement gained some legs because, obviously, in our country, we don't need 50 different standards for Algebra I or Algebra II.

So the State Board of Education does support vehemently the notion of Common Core standards, as well as common assessments. In our country, in order for every—for the country to be competitive with countries from across the world, we need to set high standards and then figure out ways to get all of our students to meet those standards.

Senator HAGAN. When you mention “around the world,” do you look at curriculums in other countries and the number of days that students go to school?

Ms. GARLAND. Yes.

Senator HAGAN. And how do those common standards compare to other countries?

Ms. GARLAND. Our Common Core standards have actually been benchmarked against international standards, and so we feel very confident that once the Common Core is initiated, that the standards themselves will be the same level of knowledge and skills that students across the world have to demonstrate when they graduate from high school.

However, in our country, our students do not attend school as many days. It is typical in our country around 180 days for school attendance. We know that in some countries, students attend school 220 days. So we are falling behind in terms of days that our students are able to attend school to achieve those standards.

Senator HAGAN. Somebody once told me that by the time our students graduate from high school, in another country, a European student would have gone to school for a whole year?

Ms. GARLAND. Right. I think in our country we have to overcome the notion of the, again, the agrarian calendar. We still struggle in some areas of our State to get support for year-round schooling of any kind because in our State, we have a notion that the summer-time should be spent at the mountains and the beach, which, obviously, we want to support the tourism industry in our State.

But we don't think that it should happen at the expense of education for our students. And so, I do think we have to break some of those paradigms if we are going to move our students forward. Just having world-class standards will not produce world-class students.

Senator HAGAN. Thank you.

Ms. Clark, in your testimony, you said that you were surprised, or perhaps that they were surprised at the finding that teachers with advanced degrees did not have better outcomes for the children they are teaching. Can you talk about that just a little bit?

Ms. CLARK. If we think about it, the notion of a one-time degree attainment against ongoing professional development, it is really counterintuitive that we would be compensating teachers for a degree they might have received 20 years ago. There certainly wouldn't be anything taken away from that teacher's initial learning—but when you put it up against ongoing professional development.

What I didn't talk about is, I think there is also the opportunity to look at experience and longevity. That is another thing the State of North Carolina and many States across the country re-enforce teachers and compensate them for years of experience when our data also showed us that that doesn't necessarily correlate with student achievement results.

Senator HAGAN. And North Carolina, I know, has professional development for principals and teachers. I know NCCAT is something that I think is highly effective. Obviously, not every teacher can attend.

Ms. CLARK. Yes, I think it is scope and scale of quality professional development rather than isolated opportunities that we have to continue to look at the local and district level, as well as the State.

Senator HAGAN. Thank you.

Dr. Arbuckle, you state that the impact of the Mission Possible has been great in terms of maintaining faculty within high-needs school districts to maintain those teachers. But yet, it remains to be seen how long it will take to increase student achievement. I want you to elaborate on that. And how long will the funding stream exist?

Mrs. ARBUCKLE. Yes. The funding that has come initially are re-directed local dollars and then some grants from some local foundations and also a Federal grant from the U.S. Department of Education. I believe it is Federal, State, or a State grant that is being reapplied for. So that funding piece has been taken care of outside of the operating budget of Guilford County Schools.

I think one of the tragedies in our public school district and the public school system is that we have so many of our children who come to school so ill prepared to enter school. There is substantial research on just the vocabulary words of children who have grown up in middle-class families versus those who have grown up in poverty, and that is just one indicator of the incidences that children come to school behind.

And so, consequently, are not proficient at grade level by grade 3, which is what I described as a line in the sand. I mean, we are projecting jail beds on the reading scores of children in grade 3, projecting jail bed need. So I think one of the investments that we must make is in early childhood education and enhancing parents' capacity to be able to provide for their children in terms of language development and so forth.

That has been, when I have questioned the district about our success, or lack thereof, in terms of Mission Possible, one of the

things that is a source of great pride is the stability of the teaching force because in these low-performing schools, you had 50 to 75 percent teaching turnover every year. And as a consequence, that impacted the continuity of the learning environment for the children. So that is an accomplishment, and people are very proud of that.

The other issue is making certain that if you have a school with low-performing or inadequate teachers, the course of time that it takes to shift that teacher population. We have a school in our district this year that is actually one of the lowest performing schools in the country, and we are initiating a transformational model that is now allowed by the State to require every person within that school to reapply for their job and to set different criteria for the hiring of the new teachers.

We are very excited about that. This is a school where we have had 27 percent of children on grade level. So, a huge challenge. And we are hopeful that being able to do this, we want to build opportunity. It will make a huge difference.

Senator HAGAN. Thank you.

Dr. Setser, when we talk about virtual learning, I do think that there will be a dramatic change in what education has looked like for so many years. But as we look at that, particularly in our rural areas, too, can you tell me how we can enhance the 21st century skills necessary for students to be successful in the workplace, through virtual education?

Mr. SETSER. Sure. A couple of comments. One is that if I polled our students over here to my right, how many of you have access to a cell phone right now? Show of hands.

[Show of hands.]

So those cell phones have Web browsers. They have text messaging. They have a way for the students to pull up content and interact with it.

So our discussion is not whether we have a computer in every home or a one-to-one laptop initiative. Those things are all critical, but we need to follow the national technology plan, which states that all students by 2015 will have access to a device or access to a way to bring content to them.

But in the meantime, for students who don't, in the rural areas, for instance, they are setting up tremendously innovative programs like going to local churches and setting up virtual kiosks where those students can learn anytime, anywhere, and the church leaders can be trained on how to execute in that virtual environment. The other thing we are seeing is in States like Georgia, virtual kiosks at McDonald's or Wal-Mart or libraries, where students can have anytime, anywhere access to bring in content to them.

So if we want to keep rural citizens in their demographic, geographic areas, where they can spend the tax dollars in those areas and bolster the local economy, you also can bring in training over the Net, such as the effort with WakeMed, where medical records transcriptionists are being trained over the Net and then doing that job in their local county. They are spending their tax dollars there and living there because they value that quality of life.

So what this medium does is allow for multiple opportunities, multiple options within a district, within a community. But school

districts and schools continue to assess the deployment of this in terms of safety issues or security concerns when multiple paths have already shown that innovation can exist in those types of environments.

So the school is a really critical partner as we move forward, where community members, community leaders can come in and use those computers that we see in places like Watauga County, where early in the morning, families are coming in from 6 o'clock to 8 o'clock during peak times, third shift, and accessing devices and content.

Those are just some sample ways that the rural communities can keep peak their localized talent where it resides, but also access the world at large on devices like cell phones that we are seeing today.

Senator HAGAN. I appreciate it. I also think we have got to be sure that these rural areas in North Carolina have access to broadband technology, and I know that MCNC just got a sizable grant to help with putting broadband in 29 rural counties that currently have dial-up. It is one thing to have access, it is another thing to have to sit there forever for something to download. So I think that is critical not only in education, but in business.

I know one of the farmers I talked to, who grows sweet potatoes and potatoes, says he needs to have an accurate count on a daily basis of what the supply shipment stream is. And yet if it takes 2 hours to download what he needs to access, just think what that does to his day. So I think that is critical.

Mr. Rectanus, STEM is probably one of the most important things that I think our country needs to be focused on right now from the standpoint of education. But I am also concerned. I know a couple of years ago, our university system graduated I believe it was two individuals with teaching degrees specific to physics. I think after 1 year, one of those two teachers wasn't even around anymore.

I think that STEM education is critical. But I also think it needs to be very much hands-on, too. I have two kids that are scientists. That is why I am very concerned that we need to do all that we can going forward to be sure that you all have great access, which I know you do here, to a lot of wonderful technology having to do with science, engineering, math, and information technology.

So share your thoughts on how we can truly integrate STEM education into every school and every grade level so that not only are our children much more interested in fields like engineering and math—and that means you girls, too. We definitely need you. But have the tools that they need to be successful.

Mr. RECTANUS. Is that all, Senator?

Senator HAGAN. That is all. You have 1 minute.

[Laughter.]

Mr. RECTANUS. All students—I mean, this is really about equity. It is about all students, and it is about connecting our education pipeline to our economic pipeline. We know that that is the case.

I think in our minds, and NC STEM's approach, we actually feel that the rural communities are an asset to this. We have focused—while our network is statewide, we focused our STEM community's



effort in rural communities around the State, and we have done that very purposefully. We have done it for a few reasons.

No. 1, the economic changes going on in a place like Kinston that historically has done tobacco and manufacturing is now in advanced manufacturing in aerospace. This is happening now. This is a challenge that must be addressed immediately and for all students and for all workers. Your example outlines the need for a farmer to use STEM skills, which are critical.

We also do it within these communities because they have a great opportunity. These communities have worked together, but they have innovated. They have been innovative in the past. Oftentimes, they have done that in black box. They haven't been able to share that with communities around the State, and we see that as a great opportunity.

And it is really necessary for us to provide those examples and to share what is going on in each of these different areas, but also across the State so that not everyone is forced to boil the ocean.

Senator HAGAN. How do we recruit the teachers to go into these fields and teach?

Mr. RECTANUS. It is a great question. In fact, Davie County is one example that has partnered with Appalachian State University for a number of years and is now working with Wake Forest Baptist Medical and UNC-Greensboro to identify and partner leading edge pre-service and early career teachers with master teachers or more experienced teachers to help give that broad perspective. And they are now bringing in business professionals that really add a new dimension into bringing those folks into this.

I think the opportunity to address the STEM skills beyond—within the university system to address STEM skills outside of the schools of education is critical.

Senator HAGAN. Thank you.

Mr. RECTANUS. And I think there is opportunity to do that.

Senator HAGAN. Thank you.

One other example for the students, I was actually taking a tour this last week at a company in North Carolina, and we are making these airplanes now out of composite materials because they are much lighter. So they can use a whole lot less fuel for traveling distances. But one of the draw-downs of that composite material is when lightning hits it, it might get fried. So you have to have a shield over it that would detract the lightning so it is not going to hit it or so it wouldn't affect it. It would go around it.

A company in North Carolina has developed a sort of composite that just makes a little shield over it. It is just fascinating what new technologies can do. So there is a lot of great things that we still need your wonderful minds to help figure out.

Ms. McCray, as a 32-year teacher, you certainly have a lot of experience in so many areas in our education system, and I know that there is an abundance of research and several examples of programs even in the Charlotte-Mecklenburg system school district that aim to evaluate a teacher's effectiveness in the classroom.

As a classroom teacher, can you share what you think is the most effective design for evaluating a teacher's performance?

Ms. MCCRAY. The No. 1 thing, I think, would be my being able to reach each student that is in my class. So I would have to say

that teacher-to-pupil ratio is going to be one of your most effective designs there.

Senator HAGAN. How would you relate that to online teaching?

Ms. MCCRAY. For online teaching, well, on the elementary level, we don't do too much of that. But with my own daughter, who is now a freshman in college, I had the experience of watching her take an online test, exam at Elizabeth City. So I was amazed by how they do all of that.

For our students online what we can do, what we are doing presently is part of our literacy program where the students can work one-on-one in a remediation-type program, where they don't need the teacher there. The teacher more or less does follow up with them afterwards. So that is a lot of the online we are doing.

Now as far as the science, we do have a lot of hands-on with the science. And we just need the time to do it during the school day where our students are exposed to something other than just their basic literacy program and their math program because they do have a joy of learning science and social studies. So we have to bring those other core subjects in, not just during test time when they see that they are testing on something that is not basically just a story. But we have to expose them to that type of instruction during the day.

I have seen us sort of shift away from instruction with our science and our social studies because now we are more assessment-driven.

One thing I do want to say. Poverty is the same in an urban area as it is in a rural area. That is why it is important that you all really totally fund our Title I and our IDEA programs because that helps a lot of urban areas with their pockets of poverty.

Senator HAGAN. Thank you.

You know, I know we are getting close to the end. Is there something we have left out that you just have this burning desire we need to share?

Dr. Garland.

Ms. GARLAND. We have talked so much about the need for effective teachers in all of our classrooms in low-performing schools, rural and urban. The State board is taking a different view of how we fill the positions in those classrooms.

There is new research that has just been released by UNC general administration that shows that Teach for America teachers actually do a very good job of working in the rural areas of our State. In fact, they outperform in many cases our own UNC graduate teachers from out of State.

I think what we have to do in our educational field is break some of those traditional ways that we have gone about looking at the teaching profession. We have felt like we had to recruit people that would commit 30 years in order for them to be accepted quickly into the profession.

Certainly, we don't want anybody to teach in the public schools if they are not capable of teaching in the public schools and if they are not competent. However, in some of our rural areas if we can create a culture of continuous change so that we have a crop, if you will, of Teach for America teachers that come in and out. The military does it all the time.

They are constantly working in a field where they have new recruits coming and going, and yet they are able to bring them in, induct them, and make them very competent and ready to work in a very short period of time. Where in the schools, we have thought that folks had to come and stay forever.

And so, looking at how we fill those high-needs areas like STEM, if we can get those teachers for 3 or 4 years, bring them in, quickly acculturate them to their surroundings, and then create a culture where that is the norm, then I bet we can meet some of those high-needs areas with very competent teachers.

Senator HAGAN. I saw an advertisement in a school newsletter that said some of the northeast boarding schools were recruiting students to teach for 2 years in science and math. Just commit those 2 years, give this back, and I thought that was an interesting approach to a recruitment process.

Ms. GARLAND. You have to have a good induction program because they have to know something about pedagogy when they come. But if we put the right structures, then I think it will work.

Senator HAGAN. Ms. Clark, let me ask you one question regarding pay for performance. Can you talk about how that is accepted at the teacher level? I know there is so much talk on that around the country right now.

Ms. CLARK. I think we are in the early stages in Charlotte of designing our pay for performance, and we will be doing that with our teachers. We have had a wonderful opportunity with our Teacher Incentive Fund grant to pilot some different approaches to pay for performance.

So we have both opportunities for teachers to design their own goals, as well as a measure that has individual student growth as a part of that measure. And we are in our final year with that grant next year, and we will have another iteration of that as well. So we are designing this over a 4-year period of time and being very intentional about involving our teachers.

Ms. McCray sits on our steering committee at the district level, representing MCAE, and we also have another teacher on the committee. We will be expanding it into stakeholder groups as we move forward.

Senator HAGAN. Great. Let me ask my staff here how we are doing on time. We need to wrap up?

Well, I just want to thank you, and I see Chairman Roberts leaving. Thank you so much for being here. I always look to you for great guidance and advice. She does a great job in Mecklenburg County and always gives me great information.

The reason we are here is because we want to have the best-educated students in the future, and all of you are so committed and so dedicated. I just want to thank you for all of your information.

I am thrilled to be in the U.S. Senate. I am thrilled to be a part of the Health, Education, Labor, and Pensions Committee, and I want to work together with my colleagues to make significant changes to the No Child Left Behind law by hearing in detail today about the innovative work that all of you are doing across North Carolina, as well as the Department of Education's commitment for supporting these innovative programs.

I also want to thank so much the principal, Ms. Bowen. Thank you so much for letting us come here to your school. And I believe you said the assistant principal Mr. Yakin helped to really coordinate this. So I want to thank you, too.

I really want to thank the students for being here, and at the end, I want to come over and chat with you and hear what your questions and concerns are. Once again, we are all here because of you.

Thank you so much. The Fostering Innovation in Education hearing for the Senate Committee on Health, Education, Labor, and Pensions is now adjourned.

[Whereupon, at 12:21 p.m., the hearing was adjourned.]

