

ESEA REAUTHORIZATION: IMPROVING AMERICA'S SECONDARY SCHOOLS

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 REAUTHORIZATION, FOCUSING ON IMPROVING AMERICA'S SECONDARY SCHOOLS

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ESEA REAUTHORIZATION: IMPROVING AMERICA'S SECONDARY SCHOOLS

TUESDAY, MAY 4, 2010

U.S. SENATE,
COMMITTEE ON HEALTH, EDUCATION, LABOR, AND PENSIONS,
Washington, DC.

The committee met, pursuant to notice, at 2:20 p.m. in Room SD-430, Dirksen Senate Office Building, Hon. Tom Harkin, chairman of the committee, presiding.

Present: Senators Harkin, Bingaman, Murray, Reed, Sanders, Casey, Hagan, Merkley, Franken, Bennet, Burr, Murkowski, and Roberts.

OPENING STATEMENT OF SENATOR HARKIN

The CHAIRMAN. The Senate Committee on Health, Education, Labor, and Pensions will please come to order.

Today's hearing, "Improving America's Secondary Schools," will explore the challenges facing America's middle and high schools and how ESEA reauthorization can help States and districts address those challenges.

Without question, among the most serious challenges is the high dropout rate in the United States. Each year, 1.2 million students drop out of school; that's about 7,000 per day. This crisis disproportionately affects students who are low-income, minority, or have disabilities. While only 70 percent of America's students graduate from high school on time, that number drops to just over 50 percent for Hispanic, Black, and Native American students. Students from low-income backgrounds are 10 times more likely to drop out of high school than their more affluent peers.

Research shows that the middle grades are a critical time to influence whether students graduate from high school. The decision to drop out is rarely the result of a single life event; in fact, many students exhibit academic warning signs years before they leave high school. We need to look at ways to identify these students through the use of early-warning data systems. As early as sixth grade, such systems can use information on, for instance, absence rates or course failures to identify students who are struggling. This information can be used to target appropriate interventions to get them back on track. ESEA reauthorization offers an important opportunity to improve outcomes for millions of students by turning around the lowest performing secondary schools.

About 2,000, or 12 percent, of American high schools produce over 50 percent of the Nation's dropouts. Twelve percent of the

schools produce over 50 percent of the Nation's dropouts. In this reauthorization, I also intend to address the full spectrum of students' educational needs. We need to do more to ensure that every child gets a high-quality education early in life. We need that support to start at birth, if not sooner. In addition, we must do more for secondary school students. Currently, only about 10 percent of title I funds go to high schools, although they educate about one-quarter, or 25 percent, of low-income students.

So, today I look forward to hearing from our witnesses on the most effective interventions to help students stay on track to graduate and prepare for success in college and careers. I also look forward to the recommendations for what it takes to create world-class secondary schools that will help all students succeed.

I know Senator Enzi will be here later, but Senator Burr is here, and I would turn to him if he has his opening statement.

STATEMENT OF SENATOR BURR

Senator BURR. Mr. Chairman, very briefly, let me ask unanimous consent that the Ranking Member's opening statement be made a part of the record.

The CHAIRMAN. It will be included in the record.

Senator BURR. I thank the Chair. Let me also take this opportunity, if I could, to welcome our witnesses, especially Tony Habit, from North Carolina, who has really led a charge at trying to change the outcome of education in our State.

Let me just echo something I think the Chairman alluded to, even though I didn't hear the whole statement. This past year, only 70 percent of our 9th through 12th graders crossed the goal line on time—meaning, a diploma, graduation. If this were a disease, we'd call it an epidemic, and we'd do whatever we needed to, to fix it. The truth is that, community by community, legislature by legislature, we all seem numb to the fact that 30 percent of the kids do not, on time, get the document they need to be invited for an interview. Federal law says that everybody can fill out an application.

But, stop and think for a moment. Who is invited for an interview who does not have a high school diploma? For education? To allow this to happen for 30 percent of our high school students is unconscionable. At a time that we are challenged, right now, to address the career paths of our graduates of higher education, where, last year alone, over 60 percent did not find a career; they found a job, but not a career. This year, in less than a month, we will see another group that comes out with 9.7 percent unemployment.

Mr. Chairman, we have to fix education, we have to fix the economy, we have got to fulfill the promise we made to these kids: "If you will stick with it, if you will work hard, education will be the key to an unlimited opportunity for you, and you will only be limited by how hard you are willing to work and what you are willing to put in."

It is my hope that we will listen intently to what our witnesses have to say today. This may be our last best chance to get this right.

I thank the Chair.

The CHAIRMAN. Thank you, Senator Burr.

I will leave the record open for Senator Enzi's opening statement.
[The prepared statement of Senator Enzi follows:]

PREPARED STATEMENT OF SENATOR ENZI

Thank you, Senator Harkin, for holding this hearing today on improving America's Secondary Schools. The success of our Nation's middle and high schools is vital in preparing our students for the 21st century economy.

The Federal Government's role should be to encourage and support States and school districts so that more students graduate from high school on time with the knowledge and skills they need to attend college and enter the workforce without the need for remediation. However, the present situation is discouraging. Every day in the United States, 7,000 students drop out of school. If the high school students who had dropped out of the class of 2009 had graduated instead, the Nation's economy would have benefited from an additional \$335 billion in income they would have earned over their lifetimes. It is an incredible statistic. Because we could not reach those 7,000 students, it will cost us and them \$335 billion in income, which means we all lose.

The future outlook is no better. It is estimated that without dramatic changes in our Nation's lowest-performing middle and high schools 12 million students will drop out of school over the next decade. The result long term will be a loss to the Nation of \$3 trillion, and as you can imagine, even more in terms of the quality of life for those dropouts.

We simply cannot afford to lose those students. We must deal with the situation head on—we cannot allow students to “waste” their senior year, and graduate unprepared to enter post-secondary education and a workforce that is focused on skills and knowledge.

As we begin our work on the reauthorization of the Elementary and Secondary Education Act we need to strengthen programs that provide relevance, context and rigor for students in both middle and high school. While some of my colleagues may disagree, I believe it is time to bring attention to the “Secondary” part of the Elementary and Secondary Education Act. The Federal Government needs to provide some resources to school districts for these efforts and ensure that the reforms used are data-driven and have a track record of solid evidence based success. We learned at a hearing on school turnaround held a few weeks ago that there is no silver bullet. School districts need the flexibility to draw from the resources that are available the best possible solution for each of these struggling schools.

In addition, it is important to emphasize the fact that a high school diploma does not guarantee that a student has learned the basics. Nearly half of all college students are required to take remedial courses after graduating from high school, before they can take college level coursework.

The witnesses before us today demonstrate that this work is hard, but can be done. I am pleased that we have a representative of a career academy here, Karen Webber-N'Dour. These schools work for many students across the country because they help students discover their true potential. For example, I have heard from students in career academies that they entered thinking they

would graduate from high school prepared to enter the construction trades. Instead, by being in a career academy, they discovered they had the talent and ability to become architects. Career academies provide the same rigorous content as traditional high schools, but do so in a way that is relevant to students and provides a context for their learning.

Without a plan for reforming our secondary schools, the outcome for many of our students will not change, which is not acceptable. If we are to remain competitive in a global economy, we cannot afford to lose people because they do not have the education and skills they need to be successful. Strong partnerships and alignment among K-12 schools, institutions of higher education, business and government will help us meet this need.

I want to thank each of the witnesses for being here today to share their compelling stories. I hope we can all learn from you how the Federal Government can be a partner in middle and high school reform efforts.

The CHAIRMAN. Let me just take a moment to introduce each of the witnesses.

First, we have Cassius Johnson, program director for education policy at Jobs for the Future, in Boston, MA, where he handles Federal secondary and post-secondary policy development and advocacy. Next is Don Deshler, the Williamson Family distinguished professor of special education and the director of the Center for Research and Learning at the University of Kansas. An expert in adolescent literacy, Dr. Deshler received a presidential appointment to serve as a member of the National Institute for Literacy Advisory Board.

[VOICE.]

The CHAIRMAN. I said that. University of Kansas. I said that.

[Laughter.]

After Dr. Deshler, we will hear from John Capozzi, principal of Elmont Memorial High School, in Elmont, NY. Under his leadership, Elmont High School has beaten the odds, graduating over 94 percent of its students, 97 percent of which go on to college.

I know Senator Bennet is not here yet. He wanted to introduce our next witness, but I will just say it's Rich Harrison, who is the founding middle school director of the Denver School for Science and Technology, in Denver, CO. Then, we will hear from Karen Webber-N'Dour, principal of the National Academy Foundation High School, in Baltimore, MD, a public high school that provides rigorous college preparatory and career pathway instruction.

Senator Burr also mentioned Tony Habit. I wonder if the Senator from North Carolina would like to add anything to the introduction for Mr. Habit.

STATEMENT OF SENATOR HAGAN

Senator HAGAN. Thank you, Mr. Chairman, I certainly would.

I want to echo Senator Burr's welcome of Dr. Tony Habit to our committee today, as we welcome all of the witnesses here that are going to testify. I want to tell the group just a little bit about Dr. Habit.

He is President of the North Carolina New Schools Project and he has more than 20 years in public school innovation reform. The

New Schools Project, is an independent, not-for-profit organization established to accelerate the pace of innovation in the State of North Carolina. As president, he has been working diligently to ensure that every student has access to a high-quality education that is going to prepare them for college and a career.

The New Schools project is in partnership with our North Carolina Department of Education, and launched an unprecedented effort to create more than 100 new and redesigned high schools across the State since 2008. So far, they have created about 106 new secondary schools.

In reference to what Senator Burr was saying concerning the dropout rate, over half of the early-college high schools, had a zero dropout rate. I know, at the Medical School at Duke, they are going to create a high school focused on health and life sciences.

North Carolina State University is going to focus on agricultural research—in a rural region of the State looking at biotechnology, engineering and sustainable energy. I know that, in the county where I am from, one of our community colleges, GTCC, has an excellent early-college program. As a matter of fact, one of my interns, many years ago, was a dropout, and then successfully completed the early-college program and went on to matriculate into UNC-Chapel Hill.

It is a great program, we have done great things, and I look forward to hearing your testimony.

The CHAIRMAN. Thank you, Senator Hagan.

Senator Bennet, I had briefly introduced Rich Harrison, but, I would yield to you if you would want to expand on it. I just basically did not say much, because I do not know him.

Senator BENNET. Well, I do know him, so I appreciate it, Mr. Chairman. Sorry I was a minute late.

STATEMENT OF SENATOR BENNET

Senator BENNET. It is an honor to introduce Rich Harrison to the committee.

Rich founded the Denver School of Science and Technology. DSST is an open-enrollment school in the Denver public schools, reflecting the diversity of our community. Forty-five percent of the students come from economically disadvantaged families, and 62 percent of the students are Latino or African-American. Almost half of this year's senior class will be the first in their family to go to college. Every senior in DSST's first three graduating classes has earned acceptance to a 4-year college. Then, when students from DSST get to college, they are ready to excel. Only 7 percent of students need remediation.

DSST was chosen as one of three finalists, out of over 1,000 schools, for the Race to the Top Commencement Challenge. I might say we learned, today, they had not been selected, which means that there must be some extraordinary place somewhere else in the country, because I cannot believe there is a place that would have been a better choice than DSST.

We can learn from the success of programs like DSST, and Rich demonstrates the kind of leadership it takes to make reform work. Prior to founding DSST, Rich served as the principal of Kipp-Cole College Prep, joining the school after its reconstitution from Cole

Middle School. Before becoming administrator, Rich was an English teacher at Peak-to-Peak Charter School, which is consistently rated one of the Nation's top 100 high schools.

I know I speak for my colleagues when I say we are looking forward to your testimony.

I can tell you, Mr. Chairman, I have spent many hours at DSST over the years, to learn from the teachers and the students that are there about what they are doing to achieve these results, and it turns out not to be rocket science.

I look forward to hearing Rich's testimony.

Thank you.

The CHAIRMAN. Thank you, Senator Bennet.

Now, I think all of you were notified by our staff that you would be given 4 minutes. Your statements will all be made a part of the record in their entirety. Because of some time constraints today, if you can just kind of sum up, in about 4 minutes or so, your main points, and then we can get into an open discussion, here. I would appreciate it very much.

We will start with Mr. Johnson.

Welcome Mr. Johnson, please proceed.

**STATEMENT OF CASSIUS O. JOHNSON, DIRECTOR OF
EDUCATION POLICY, JOBS FOR THE FUTURE, BOSTON, MA**

Mr. JOHNSON. Yes, Senator Harkin, thank you for the opportunity to speak before the committee today.

I commend the outstanding work that you are doing on behalf of the American people and on this critical piece of domestic policy, the Elementary and Secondary Education Act.

The mission of Jobs for the Future is to double the numbers of youth and adults who obtain the credentials and the skills needed to become competitive in today's labor market. Jobs for the Future identifies, develops, and promotes new approaches that are helping communities and States in the Nation compete more effectively in a global economy.

As director of education policy, I have worked closely with staff in over 200 communities in 48 States to develop innovative educational workforce solutions.

The continued failure of secondary schools in this country, in the United States, to dramatically improve the educational attainment of low-income young people, young people of color, and those in rural America, is the most significant factor in our country's drop from 10th to 9th—from 1st to 10th in the world in completion of race of post-secondary education. Reversing this course will require strong and coordinated action and a strengthened State and Federal partnership to raise graduation rates. From JFF's experience working across the Nation, we have learned that dramatically better outcomes are possible, especially for low-income students and students of color, but only when there is a continued and significant investment in groundbreaking and innovative high school designs.

I want to talk about two pieces of JFF's work. First of all, the national network of early-college high schools. Launched in 2002, these schools have expanded to 200 in number, in 24 States, serving 42,000 students. In fact, the largest of the work is going on in

the great State of North Carolina. In the 8 years since the early-college design was first developed, it has proven to be an exceptional approach for increasing the likelihood that high-needs students are on track for high school graduation and prepared for college. Students have the opportunity to earn up to 2 years of college credit in an associate's degree, and, on the average, are obtaining 23 credit hours and getting exposure to a college-going culture.

Another encouraging trend worth noting is the spread of what we call "Back on Track" models that are getting promising results with young people who are most at risk of not graduating from high school on time, if at all, and most likely not to complete a post-secondary credential. Six years ago, New York City began groundbreaking work to open Back on Track schools as part of a systemic reform initiative to replace low-performing high schools. You see some of the same work going on in Philadelphia, in what they call accelerated high schools.

To get to my recommendations, though, I want to leave you with three "to do's" in this ESEA reauthorization. First, adopt rigorous and fair graduation-rate accountability. That means, Congress should set the requirements that the State give significant weight to improvements and graduation rates. There's broad consensus that graduation rates should be given as much weight as academic performance in holding schools, districts, and States accountable.

Second, the second "to do" is to turn around low-performing high schools. Too often, policies directed at improving low-performing schools have little impact on the 2,000 low-graduation high schools. We know that the off-track population tends to be concentrated in these schools. We recommend that Congress require districts and their schools to work with these schools to analyze and use data to identify the students who are off track to graduation, and put them in a place where back-on-design models can get them ready for college and to be successful in today's economy.

Third, the third "to do" is support systemic initiatives, or, rather, establish incentives and advance innovation and invention. When a most-promising recent Federal policy develops an expansion of Federal support—it's expansion of Federal support for innovation at all levels of—to address the Nation's most perplexing education performance challenges. Just last week, foundation community came on board to supplement the Federal Government's investment through i3 to 500—to a tune of \$560 million to the \$650-million initial investment by the Federal Government. That's a powerful statement that speaks to the role that the Federal Government can play in scaling and actually calls—allowing for the invention of more effective models for off-track students, all toward the goal of getting more kids ready for college and success in today's economy.

I look forward to the question-and-answer discussion.

[The prepared statement of Mr. Johnson follows:]

PREPARED STATEMENT OF CASSIUS O. JOHNSON

SUMMARY

The continued failure of secondary school systems in the United States to dramatically improve the educational attainment of low-income young people, young people of color and those in rural America is perhaps the single most significant factor in our country's drop from first to tenth in the world in the completion rate of post-secondary degrees by age 35. Reversing this course will require strong and co-

ordinated action and a strengthened Federal-State partnership to raise the high graduation rate and the college preparedness level of high school graduates, especially among those from low-income families.

SIGNS OF PROGRESS

From Jobs for the Future's experience working to improve college-ready high school graduation with school, district, and State partners we have learned that dramatically better outcomes—especially for low-income students and students of color—are possible, but only when there is continued and significant investment in groundbreaking and innovative high school designs.

Around the country, innovative or redesigned high schools are beginning to amass evidence of their effectiveness in graduating more students with a college-ready diploma. One key example is the national network of early college high schools launched in 2002 with generous resources from the Bill & Melinda Gates Foundation, that has expanded to more than 200 schools in 24 States, serving 42,000 students.

Another encouraging trend worth noting is the spread of what we call Back on Track designs that are getting promising results with the young people who are the most at risk of not graduating from high school on time, if at all, and most likely not to complete a post-secondary credential. New York City, Philadelphia and a dozen more cities across the country are taking on an effort to open such schools as part of systemic reform initiatives to include invest in smaller schools or programs for their overaged and under-credit students, to help them get back on track to graduation.

RECOMMENDATIONS

A key task before the committee is to build from such exemplars of what is possible to the creation of a policy environment that accelerates the transition away from high schools that fail large numbers of students toward options that reduce dropout rates and increase college-readiness and success. To this end we would like to emphasize four major recommendations:

- **Rigorous and Fair Graduation Rate Accountability.** Congress should set the requirement that States give significant weight to improvements in graduation rate. At the same time, the law needs to avoid penalizing the designs of innovative high schools such as early college (where students may spend 5 years and get significant college credit) or back on track models that serve students who have already spent many years not progressing in school and yet are getting exceptional outcomes for these youth.

- **Turning Around Low-Performing Secondary Schools.** We know that the off-track population tends to be concentrated in these schools. We recommend that Congress require Districts with these schools to work with the schools on analyzing and using data to identify the students who are off track to graduation and put in place appropriate back on track designs for them.

- **Support district systemic activities.** Congress can create incentives for systemic approaches to implementing strategies and models aimed at the large number of off-track students and dropouts by requiring districts and schools to use early warning indicators to intervene and provide support and put in place back-on-track alternative education options, as well as work with community-based organizations on community dropout recovery strategies.

- **Incentives, Innovation and Invention.** The ARRA-funded Race to the Top and Investing in Innovation (i3) funds commit the Federal Government to foster innovation in practice and policy. Along with scaling innovative strategies, we recommend that Congress support the research and development of new school models that show promise in serving the most vulnerable and underserved of our youth.

Chairman Harkin, Ranking Member Senator Enzi, and the honorable members of the U.S. Senate HELP Committee, thank you for inviting me to speak with you today. I commend the committee for its hard work during the 111th Congress on behalf of the American people and now as you move forward on the reauthorization of a critical piece of American domestic policy, the Elementary and Secondary Education Act.

I speak to you from two perspectives.

First, I speak from a body of work: As Director of Education Policy, I work closely with the program staff at Jobs for the Future in Boston and our partnerships in over 200 communities in 41 States to cultivate and promote innovative education and workforce strategies. Jobs for the Future identifies, develops, and promotes new

approaches that are helping communities, States, and the Nation compete more effectively in a global economy. Our work improves the pathways from high school to college to family-sustaining careers. The JFF mission is to double the number of youth and adults who attain the credentials and skills needed to be competitive in today's labor market.

Second, I speak from personal experience: In 1996, 14 years ago, I was a senior and student body president at Hamilton High School in rural northwest Alabama. My alma mater is one of the 2,000 low-graduation rate high schools across the Nation that together produce more than half of U.S. dropouts. Having returned to Alabama on several occasions in the past few months, I know from conversations from friends, families and community leaders that low academic preparedness and the large number of dropouts are creating formidable challenges as the region tries to attract new jobs and economic activity to an area plagued by unemployment and a rural drug problem. From my small hometown to the great urban centers of this country, continuation of current trends in high school performance and graduation will lead to an unacceptable bifurcation of opportunity—a widening gulf between individuals with the skills and credentials to access higher paying careers and the poor and low-skilled who have little prospect of advancement. Unaltered, these trends pose a severe threat not only to our Nation's future economic growth, but to our social fabric.

In spite of the high stakes involved here, I sit before you today encouraged by the questions being asked in this hearing. My hope is that today's discussions send a clear message that it is truly time to put the *secondary* into the Elementary and Secondary Education Act. This reauthorization of ESEA is the time to tackle the K-12 institution most resistant to reform—the low-performing high school.

THE IMPERATIVE

The continued failure of secondary school systems in the United States to dramatically improve the educational attainment of low-income young people, young people of color and those in rural America is perhaps the single most significant factor in our country's drop from first to tenth in the world in the completion rate of post-secondary degrees by age 35. Among the lowest-income students, just 21 percent graduate from high school prepared for college; an alarmingly low 11 percent earn a post-secondary credential, compared to a 51 percent credential completion rate for students from higher income brackets (NCES 1988 and 2000).

Reversing this course will require strong and coordinated action and a strengthened Federal-State partnership to raise the high graduation rate and the college preparedness level of high school graduates, especially among those from low-income families.

The committee is to be commended in recognizing that focusing just on raising achievement in high school is not enough, that we must also raise graduation rates dramatically. With the high school graduation rate basically flat for several decades, our Nation cannot make the gains we need in productivity without dramatic reductions in the dropout rate and significant and steady increases in district and State graduation rates.

SIGNS OF PROGRESS

From Jobs for the Future's experience working to improve college-ready high school graduation with school, district, and State partners we have learned that dramatically better outcomes—especially for low-income students and students of color—are possible, but only when there is continued and significant investment in groundbreaking and innovative high school designs. Some of the best of these efforts are represented on this panel.

Around the country, innovative or redesigned high schools are beginning to amass evidence of their effectiveness in graduating more students with a college-ready diploma. One key example is the national network of early college high schools launched in 2002 with generous resources from the Bill & Melinda Gates Foundation, that has expanded to more than 200 schools in 24 States, serving 42,000 students. In fact, the largest number of these high schools—70—are in North Carolina where Tony Habit and his New Schools Project have partnered with the State and with JFF to implement these schools. In the 8 years since the early college design was first developed, it has proved to be an exceptional approach for increasing the likelihood that high-need students are on-track for high school graduation and prepared for college.

With a student population primarily composed of students of color, low-income youth, and first-generation college-goers, early colleges have overcome historically low education attainment levels and propelled students on a pathway to post-

secondary success. By graduation, early college students have 23 college credits on average, and enroll in higher education institutions at significantly higher rates than peers in comparison schools.

Moreover, a growing body of rigorous research that includes experimental and quasi-experimental studies has shown that early college students progress through key college preparatory courses at a significantly higher rate than control students and outperform peers in comparison schools. It is particularly striking that these schools appear to be closing the performance gap for students of color.

Even as we sit here today Early College High Schools across the country are marking the success of these high schools by holding events to raise visibility in their communities as a part of the national Early College High School Week.

Another encouraging trend worth noting is the spread of what we call Back on Track designs that are getting promising results with the young people who are the most at risk of not graduating from high school on time, if at all, and most likely not to complete a post-secondary credential. We use the term “back on track” to differentiate such schools from traditional alternative schools, which too often have been holding tanks for troublesome students. In contrast, Back on Track schools combine accelerated academics with the supports and culture of effort these young people need to succeed in high school and college.

Six years ago, New York City began groundbreaking work to open such schools as part of a systemic reform initiative to replace failing high schools with new small schools for entering ninth graders. At the same time, they invested in even smaller schools or programs for their overaged and under-credited students, to help them get back on track to graduation.

The highest performing of these back on track schools are now graduating students at 2 to 3 times the rates of other high schools and students are earning almost twice as many credits in their first year as they earned upon enrolling in the schools. In Philadelphia, a similar effort to start what they call Accelerated Schools has graduated 853 over-age and under-credited students over the last 3 years, raising the district's graduation rate by 2 percentage points each year.

This work continues to spread. We have worked in over a dozen cities, from Mobile, AL to Portland, OR that are undertaking similar efforts.

POLICY RECOMMENDATIONS

The progress of the innovative frontrunner cities and States in seeding and supporting better alternatives for struggling students is impressive. But while identifying exemplars is important, creating a policy environment that promotes and expands successful secondary school options while shrinking the number of low-performing high schools is another.

What suggestions does Jobs for the Future have for accelerating the transition away from high schools that fail large number of students toward options that can reduce dropout rates and increase college-readiness and success? Our recommendations fall into four categories.

1. Accountability measures that incorporate graduation rates rigorously but fairly;
2. Turnaround policies that are appropriate for middle and high schools and that create openings for more quality options for off-track youth;
3. Support district systemic activities such as reporting of and visibility of off-track students and the implementation of appropriate schools, programs or strategies that put these students back on track to graduation; and
4. Incentives for innovation to create, test, and grow more effective high schools to help more low-income young people graduate—and graduate ready for college success.

Rigorous and Fair Graduation Rate Accountability. As with few other topics in education reform today, there is strong consensus about including graduation rates in high school accountability systems. Advocates and policymakers agree that graduation rates should be given equal weight with academic performance when holding schools, districts and States accountable for student achievement. Education reform is no longer just about getting students the right curriculum, teachers and supports. We must get more students across the line with a diploma in hand and ready for the next step to post-secondary education and training. JFF makes the following recommendations to Congress for building on current regulations and finishing the job on graduation rate accountability:

- Define the graduation rate as a 4-year cohort graduation rate adjusted for transfers in and transfers out.
- Require States to set aggressive annual measurable objectives for increasing the number of students who graduate.

- Authorize the Secretary to approve State proposals to use an extended year graduation rate for select schools such as early college high schools and back-on-track schools.
- Allow back-on-track schools to show interim progress towards annual measurable objectives through predictive indicators of student achievement, such as the number and percentage of students earning credit in core courses.
- Ensure that any requirement by the Secretary that a percentage of students graduate under a 4-year cohort graduation rate allows for an exemption mechanism, such as a waiver, for select schools that by design will require more than 4 years for students to complete (i.e. early college high schools and back-on-track schools).

Turning Around Low-Performing Secondary Schools. NCLB provisions to improve low-performing schools have had little impact on the 2,000 low graduation rate high schools that account for over half of the Nation's dropouts. Many of these schools with graduation rates below 65 percent have not been identified as low performing, in part because graduation rate regulations have yet to go into effect. The "differentiated accountability pilot program" and the recent ARRA School Improvement Grant requirements for identifying persistently low-performing schools have established a framework for distinguishing among troubled schools and driving the most intensive set of reform strategies to those that are the lowest performing. These developments are essential to the goal of creating incentives that advance the development and scaling of quality pathways, especially for those students who are off-track to graduation. JFF has found that, in many of these high schools, up to 80 percent of students are behind in skills or credits.

Congress should adopt school turnaround provisions that provide incentives and resources for States, districts and high schools to implement strategies and models that meet the challenges of large numbers of off-track students. Congress should:

- **Permit differentiated accountability.** Allow States to distinguish between schools and districts in need of intensive interventions and those that may be closer to meeting annual measurable objectives.
- **Prioritize low-graduation rate high schools.** Require States and districts to prioritize for immediate action secondary schools with graduation rates below 65 percent for immediate action.
- **Require specific school turnaround activities.** Require schools identified for turnaround to analyze data to determine the number and percentage of students that are significantly off-track and identify strategies and models to put them back on track to graduation.
- **Require district-wide activities.** District level leadership is essential for systemic approaches to implementing strategies and models aimed at the large number of off-track students and dropouts in the schools and communities within a district. Congress can create incentives by:

- Requiring districts and schools to use early warning indicators to intervene and provide support for off-track students at risk of dropping out.
- Requiring district analysis and use of data on the district-wide off-track population in order to design interventions and put in place back-on-track alternative education options (e.g., transfer schools).
- Requiring district-wide dropout recovery strategies in partnership with community-based organizations, such as re-engagement centers and back on-track alternative education options including GED-to-college programs.

Support district systemic activities. While over a million students drop out of school each year, the population of students who are *in school* but off-track to an on-time graduation is not a marginal group. An estimated 1.3 million students are off-track to graduation by the end of 9th grade. In the lowest graduation rate high schools, up to 80 percent of entering students can be behind in skills or credits.

Most high schools are not equipped—in terms of structure, human resources, curriculum, or schedule—to deal with this challenge. Too often, the only option for off-track students is simply to repeat the same curriculum, taught in the same formats and by the same teachers who failed to engage them the first time.

Students who are significantly off-track to graduation need a very different model of schooling; they need well-staffed schools with experienced teachers and advocates, targeted instructional strategies, and accelerated learning options. Based on analyses of student data, these plans should include a range of strategies, from quick recovery systems for older students who are close to graduation to small learning communities that support multiple back-on-track strategies in a single setting to address the needs of students much further from graduation.

Congress can create incentives for systemic approaches to implementing strategies and models aimed at the large number of off-track students and dropouts by:

- **Requiring districts and schools to use early warning indicators** to intervene and provide support for off-track students at risk of dropping out.
- **Requiring district analysis and use of data on the district-wide off-track population** in order to design interventions and put in place back-on-track alternative education options (e.g., transfer schools).
- **Requiring district-wide dropout recovery strategies** in partnership with community-based organizations, such as re-engagement centers and back-on-track alternative education options including GED-to-college programs.

Incentives, Innovation and Invention. One of the most promising recent Federal policy developments is the expansion of Federal support for innovation at all levels to address the Nation's most perplexing education reform challenges. The ARRA-funded Race to the Top and Investing in Innovation (i3) funds commit the Federal Government to foster innovation in practice and policy. In response, States and districts are already changing policies and advancing ambitious plans to scale effective programs and practices. The i3 competitive grants have opened important space for innovators to experiment with and invent new strategies for improving education outcomes for the most at-risk. JFF makes the following recommendations to Congress:

- **Invest in scaling what works.** Nationally, there are numerous strategies and school models, such as early college high schools, that have demonstrated effectiveness in increasing college and career-readiness for low-income students who are ready for college and a career. Congress should continue Race to the Top, i3 and other funding streams that focus resources to ensure more widespread adoption of and implementation of innovation strategies and approaches at secondary schools.
- **Invest in invention.** The Nation will not move the needle dramatically on graduation rates without combining the redesign of failing high schools with a sustained effort at the invention of new models designed to help young people get back on track to high school graduation and post-secondary attainment. In the big cities that are ground zero of the dropout crisis, educators, youth developers, and social entrepreneurs have begun to invent new solutions that are leading to "beat the odds" results. Along with scaling innovative strategies, Congress should support the research and development of new school models that show promise in serving off-track students, English learners, and students in rural areas.

The CHAIRMAN. Thank you very much, Mr. Johnson, for the statement.

Mr. Deshler.

STATEMENT OF DONALD D. DESHLER, Ph.D., DIRECTOR, UNIVERSITY OF KANSAS CENTER FOR RESEARCH AND LEARNING, LAWRENCE, KS

Mr. DESHLER. Thank you, Chairman Harkin, for this opportunity.

If I might go right to the bottom line, speaking of adolescent literacy, with one statistic, the magnitude of the problem is this, 70 percent of all middle school and high school students read below proficiency on the NAEP. In the limited time that I have, with that as a backdrop, I'm going to talk about two incorrect assumptions, or myths, that adversely affect how struggling adolescent learners are often treated and taught in public schools, and how education public policy has been crafted.

The first incorrect assumption is this, that it is too late to do anything about students once they get to middle school or high school without sufficient literacy skills. In some of our schools, this attitude has led to placing these students in low-track classes, assigning them the least experienced teachers, and crossing our fingers, and hoping that they do not become a disruptive force in our schools, but hang on long enough to graduate, so they do not count against our dropout statistics.

From a public policy standpoint, a similar there-is-not-much-we-can-do posture has been adopted. Evidence of this is the paltry in-

vestment that the Federal Government has historically made in students in grades 7 through 12, compared to investments made in children from birth through grade six and in the post-secondary programs, such as Pell Grants.

The bottom line, our investment in adolescents is only 20 percent of the total education expenditure. Since so little is invested in students in grades 7 through 12, these students, who fall in the middle of the continuum from birth through post-secondary, are appropriately referred to as the "missing middle."

The second point that I want to make is, these students can learn. There's compelling evidence that shows that, when we use powerful evidence-based practices, dramatic changes occur in their performance. I cite two examples in my written testimony; there are thousands around the country mirroring this kind of achievement. It is not too late to change what is happening. To buy into the myth that the gap can't be closed is analogous to a doctor pulling the plug on a patient who is in the hospital because of a bad virus. The patient might be very ill and not functioning well, but he is not dead. There is still hope, and we need to act accordingly.

The second incorrect assumption is the following: "It is wiser to invest in younger children," or "Let's get them while they are young and prevent problems from occurring later" mentality. Don't get me wrong, I am a strong proponent of making investments in our younger children; there is compelling evidence to justify why it is a sound public policy to do so. However, there are a couple of fallacies in the position that "it is sufficient to put all of our eggs in the early childhood basket."

First, unlike getting inoculated for chickenpox, early literacy education does not ensure that problems will not emerge as children grow older. In other words, the inoculation does not last. As children move into middle and high school, the demands of the curriculum change dramatically; enhanced new and more sophisticated literacy skills are needed.

Second, even though we may have effective procedures for younger children, in this country we have not been effective in scaling those practices; hence, there are many young children who don't get validated practices. Many of these students move through the sieve, end up in middle and high school without the necessary skills.

In conclusion, I would like to emphasize these three recommendations:

No. 1, there are three pieces of legislation before the Congress currently: the LEARN Act, the Success in Middle School Act, and the Graduation Promises Act. All of these are well conceptualized and go straight to the problems that I have described in adolescent literacy.

And second, the importance of investment in research in adolescent literacy. Research is the engine that drives innovation, that drives improvement on the front lines. Historically, very little investment has been made in research for older populations. It is another reason that we have fewer answers than we need for older students.

I look forward to responding to your questions.

[The prepared statement of Mr. Deshler follows:]

PREPARED STATEMENT OF DONALD D. DESHLER, PH.D

SUMMARY

THE PROBLEM

When describing the “literacy health” of many adolescents in our country, the term “crisis” is not hyperbole; it is a very accurate characterization of the realities with which we must come to grips when we consider the fact that our schools must produce graduates capable of successfully competing, and leading, in the global arena. If this crisis is not addressed in the next reauthorization of ESEA, the futures of millions of today’s struggling adolescent learners will be foreclosed and our Nation’s economy and our Nation as a whole will be weakened as will the fabric of the families and communities that will become the homes to these undereducated and underprepared individuals. Some indicators of the severity of the problem are: (a) 70 percent of middle and high school students read below proficiency, (b) 30 percent of adolescents do not graduate from high school, (c) 40 percent of high school graduates lack the literacy skills employers seek, and (d) Federal investments in middle and high schools has historically been but a small fraction of investments made in younger children and those in post-secondary education—this has been referred to as the “missing middle.” This lack of funding has contributed to the dismal literacy attainment.

IMPORTANT CONSIDERATIONS IN FINDING SOLUTIONS

- Because the curriculum demands change dramatically when students move into middle and high school, the basic literacy skills that they learned in early elementary grades are necessary but *far from* sufficient. To succeed in rigorous courses, students need to acquire a whole new set of literacy competencies—in short, literacy instruction *must continue through the secondary grades*.
- There is a direct and unmistakable correlation between the literacy performance of students within a school and how highly a school is ranked. This means that if our country wants to turn around its low-performing schools, it must make literacy improvement a central part of its overall school improvement strategy.

RECOMMENDATIONS

1. Increase funding for middle and high schools.
2. Support current legislative initiatives related to adolescent achievement.
3. Support the development and adoption of State-led common standards that embed literacy standards throughout the content areas.
4. Encourage States to develop a comprehensive literacy policy.
5. Invest in professional development in literacy instruction for current and prospective teachers and administrators and encourage States to revise certification and licensure standards.
6. Invest in ongoing research and evaluation.

Chairman Harkin, Ranking Member Enzi and members of the committee, thank you for this opportunity to speak about a large and rapidly growing group of students in our Nation’s schools who are frequently misunderstood, inappropriately taught, or neglected altogether.

My purpose is to speak about the millions of adolescents whose literacy skills are so low that they cannot make sense of their classroom texts, frequently fail to graduate from high school, and are unsuccessful in transitioning into careers or post-secondary education. Specifically, I will address issues related to adolescent literacy, including (a) the nature and scope of the problem; (b) why literacy instruction is essential in middle and high schools; (c) how improving adolescent literacy performance is foundational to turning around low-performing secondary schools, (d) evidence that well-conceptualized and soundly implemented educational programs in and outside of schools can turn the performance of these students around—it is *not* too late to act; and (e) policy recommendations that would serve as the cornerstones of a sound strategy for dramatically changing the academic achievement for struggling adolescent readers and writers.

The term “crisis” is typically defined as a threat or perceived threat to an organization’s high priority goals. The term is often used to describe social challenges that our Nation faces. Frequent and inappropriate use of the term can cheapen its meaning. However, when describing the “literacy health” of many adolescents in our country, the term “crisis” is not hyperbole; it is a very accurate characterization of the realities with which we must come to grips when we consider the fact that our

schools must produce graduates capable of successfully competing, and leading, in the global arena. If this crisis is not addressed in the next reauthorization of ESEA, the futures of millions of today's struggling adolescent learners will be foreclosed and our Nation's economy and our Nation as a whole will be weakened as will the fabric of the families and communities that will become the homes to these under-educated and underprepared individuals.

THE NATURE AND SCOPE OF THE PROBLEM

As little as 10 years ago, educators and policymakers had very little knowledge about what constituted the adolescent literacy problem. Limited information was available in the professional literature, and even less research had been completed on the characteristics of struggling adolescent readers and writers.

That landscape has changed somewhat in the last decade. Increased attention from private foundations (e.g., the Carnegie Corporation of New York, the Gates Foundation, the Stupski Foundation) and even some Federal agencies has begun to shed light on the magnitude of the problem.

Among the things we have learned are the following:

- Three out of ten high school students do not graduate on time, and nearly 50 percent of students of color do not graduate on time (Gewertz, 2009).
- Six million out of twenty-two million of America's middle and high school students are struggling readers.
- According to the NAEP (National Assessment of Educational Progress), 70 percent of middle and high school students read "below proficiency"—in other words, fewer than a third of adolescents have the literacy skills they need to succeed in school or beyond.
- Only one out of four 12th-grade students is a proficient writer (Salahu-Din, Persky, & Miller, 2008).
- Forty percent of high school graduates lack the literacy skills employers seek (National Governors Association, 2005).
- Lack of basic skills by young adults costs universities and businesses as much as \$16 billion annually (Greene, 2000).
- One out of every five college freshmen must take a remedial reading course (SREB, 2009).
- Nearly one third of high school graduates are not ready for college-level English composition courses (ACT, 2005).
- Over half of adults scoring at the lowest literacy levels are dropouts (National Center for Educational Statistics, 2007).

Collectively, these findings resoundingly underscore the fact that insufficient literacy attainment negatively impacts students' opportunities for success in the classroom, leading to a higher likelihood of dropping out of school, as well as markedly reduced earnings as adults. There is no longer the same call for low-skill, high-wage jobs that there was in the past. In fact, the 25 fastest growing professions have far-greater-than-average literacy demands, while the fastest-declining professions have lower-than-average literacy demands. About 45 percent of all job growth between 2004 and 2014 will require high-level literacy skills.

WHY QUALITY LITERACY INSTRUCTION IS ESSENTIAL IN MIDDLE AND HIGH SCHOOL

In recent years, America's educational system has been successful in raising the reading and writing scores of younger children. For example, considerable evidence indicates that the Federal investment in Reading First (and its predecessor, Reading Excellence) yielded positive reading achievement outcomes. Specifically, the NAEP reading scores for fourth graders have been improving since 2002, and the racial achievement gaps have, in many instances, been narrowed. These achievement gains are the largest in reading for fourth-grade students in 33 years and demonstrate that targeted Federal investments that require schools to use evidence-based methods can produce significant growth in student performance.

Despite the success experienced with early literacy initiatives, the NAEP data tell an entirely different story for middle and high school students. The literacy performance for 13- and 17-year-olds has remained flat for the last 37 years. Hence, some of the encouraging early gains appear to dissipate as students move into the secondary grades.

The most significant instructional and policy question is whether these losses in achievement can be prevented. Fortunately, compelling evidence is accumulating showing that gains made in early elementary school can provide a solid foundation upon which to build additional success when students reach secondary schools. Two examples of successful programs will be showcased in the following section. Before looking at these cases, however, it's important to understand why early investments

in literacy education alone are not sufficient to guarantee strong literacy performance when students reach adolescence.

The literacy skills that students acquire in early elementary grades lay an essential foundation for later academic success, *but they are not sufficient in and of themselves*. The main reason is the fact that the demands of the curriculum change dramatically as students move into middle school and progress through high school, including the volume, abstractness, and complexity of text materials they must navigate. As demands change, so must a student's skill repertoire. Compared to the curriculum demands encountered in the elementary grades, starting in middle school, students are expected to respond to assignments that (a) are much longer and more complex at the word, sentence, and structural levels; (b) present greater conceptual challenges that affect reading fluency; (c) contain detailed graphics that often do not stand on their own; and (d) require an ability to synthesize information. On top of those factors, each content area (e.g., history, science, math, literature) often requires students to understand and use different types of strategies and approaches.

Because of the rapidly changing and dramatically different curriculum demands in the later grades, adolescents must acquire additional literacy skills if they are to survive, let alone thrive, in secondary school. While some students can independently make the necessary adaptations to respond to this changed landscape, many adolescents cannot—especially those who struggled in learning to read and write in the first place. These students need explicit, scaffolded, coordinated instruction to help them acquire a set of strategies for dealing with the new literacy demands they encounter in middle and high school.

It is important to note that in many low-performing secondary schools, a large percentage of the struggling reader group (as many as 80 percent) have not acquired the necessary foundational word-level skills, including phonics, decoding, word identification, and fluency. Therefore, these students must receive intensive, explicit instructions to help ensure they master these essential foundational skills, as well as instruction in vocabulary and comprehension strategies. In other words, before these students can be taught the more sophisticated literacy skills described above, they must acquire the basic word recognition, decoding, and fluency skills that they should have learned during their elementary grades. The amount of time that must be devoted to intensive literacy instruction in middle and senior high school for these students is daunting. However, in the absence of doing so, the life trajectory for these students is dismal in light of the compelling correlations between literacy competence and employment, health, remaining clear of problems with legal authorities, and family stability.

TRANSFORMING LOW-PERFORMING SECONDARY SCHOOLS BY IMPROVING LITERACY ATTAINMENT

If a large number of adolescents in a secondary school are performing poorly in reading and writing, in all likelihood, the school is a low-performing school. In other words, there is a direct and unmistakable correlation between the literacy performance of students within a school and how highly a school is ranked. This means that if our country wants to turn around its low-performing schools, it must make literacy improvement a central part of its overall school improvement strategy.

Foundational to improving any valued educational metric (e.g., high performance on State assessments, reduced dropout rates, successful transitioning to and success in careers and post-secondary education) is ensuring that students are highly proficient in the literacy skills that enable them to deal with rigorous course requirements in school and challenging career and post-secondary experiences. If students cannot read and write with relative ease, they will fail, and their schools will be among the lowest performing. *Schools will only improve as quickly as literacy proficiency improves.*

Transforming America's lowest performing middle and secondary high schools into productive learning environments in which students and teachers thrive requires an aggressive, comprehensive, approach that targets instructional, personnel, and infrastructure factors. Some of these factors are highlighted below:

School leaders make instruction a top priority. School and departmental leaders are relentless in their pursuit of meeting important learning goals for all students. Creating conditions that are favorable for instruction and learning is a top priority and toward that end, leaders facilitate the development and use of protocols for observing, describing, and analyzing practice (Elmore, 2005).

School culture is centered on student learning. Student learning is of paramount importance for all educators and each assumes a deep sense of responsibility and ownership for student growth. A school environment that is encouraging, inviting, and personalized is the norm. Staff demonstrate a sense of collective efficacy.

That is, they believe that as a whole, they can organize and execute actions necessary to have a positive effect on students. In addition, there is a strong bond of trust between colleagues, parents, and students (Hoy, Tarter, & Woolfolk, 2006).

Instructional practices are evidence-based. Recommendations recently released by the Institute of Education Sciences (Kamil et al., 2008) and the Center for Instruction (Torgesen et al., 2007) about evidence-based instructional practices are the standard against which current practice is evaluated and improvement goals are set. Instructional practices seen in high frequency across classes include explicit vocabulary instruction; direct, explicit comprehension strategy instruction; guided discussion to determine the meaning of text; and instruction in essential content knowledge and concepts with scaffolded supports.

Multi-tiered instructional supports are in place. Because some students require more intensive and explicit instruction of content and skills, schools provide scaffolded instructional supports to enable these students to build the skills that they will need to independently thrive in content classes (Ehren, Deshler, & Graner, in press). That is, instructional arrangements of increased intensity are made available to students, differentiated to address individual student needs. This instructional model is referred to as a multi-tier system of supports (MTSS), and where it is implemented with fidelity, failure rates are reduced.

Literacy instruction is integrated in all classes. Content teachers from core classes (math, science, language arts, social studies) know that for students to understand and master critical course content, they must be taught how to navigate discipline-specific content materials (Lee & Spratley, 2010). Therefore, teachers provide a “reading apprenticeship” in which they give students multiple models of how to use high-leverage learning strategies to process discipline-specific text materials and focus classroom talk on how to make sense of discipline-specific text materials (e.g., Greenleaf & Hinchman, 2009). In addition, the strategies that struggling readers learn in supplemental reading classes are reinforced in content classes so students are able to transfer what they have learned to other classes throughout their day.

Instructional decisions are driven by student, classroom, and school data. The power of data in informing instruction at the student and classroom level is widely recognized as essential for student success (Learning Point Associates, 2006). Data systems are implemented and continually refined to be more responsive to teachers and administrators as they work to improve instructional impacts. In addition to data on how students are responding to instruction, highly effective schools collect actionable data to help them gauge how fully and efficiently they are using available resources (e.g., are all slots in the supplemental reading classes being fully utilized), what factors operate within a school that “impede” progress toward specified goals, and how closely literacy services within a school are aligned with the reading and writing profiles of students. For example, data collected during school-wide professional development can provide valuable feedback relative to the speed of implementation of a new instructional practice, the fidelity of implementation, and the sustainability rate over time. These and other measures help sharpen the focus of work on improving literacy outcomes and, therefore, are used by the school’s Literacy Leadership Team to drive school-wide literacy improvement.

Continual learning for all staff is a high priority. Data-driven, ongoing, job-embedded professional development along with instructional coaching supports is made available to all teachers and administrators (Darling-Hammond, et al., 2009). When applicable, the content of professional development sessions are evidence-based. In addition, accountability systems are in place to ensure that application and follow-up coaching is provided to improve the probability of implementation. As part of these initiatives, school leaders receive professional development on literacy interventions, and the knowledge that they gain will form the basis of expectations they will set and supports they will provide to their teachers.

Student transitions from middle school to high school are carefully planned. Success in high school is greatly influenced by how successfully students transition into and succeed during their ninth-grade year (Roderick, 2006). Hence, emphasis is placed on ensuring that students are prepared socially and academically to transition from middle school into high school. Supports (e.g., counseling, mentoring) are in place to catch and prevent potential failure. Such actions are aimed at the ninth-grade year because of the high correlation between setbacks during the ninth grade and students eventually dropping out of school.

Positive behavioral supports are in place to ensure high productivity. High-quality instruction and learning occur in school environments that are orderly and where teachers and student feel safe to interact and to freely participate in the learning process. Productive learning environments are built, fostered, and maintained by implementing school-wide disciplinary practices. School-wide positive be-

havioral supports provide schools with an operational framework for achieving these outcomes (www.pbis.org).

IT'S NOT TOO LATE TO IMPROVE OUTCOMES FOR STRUGGLING ADOLESCENTS:
TWO SUCCESS STORIES

All too frequently, educators and policymakers incorrectly conclude that nothing can be done to change the trajectory that struggling adolescent learners are on. In essence, they write off tens of thousands of students as educational casualties. Such a position is not only morally wrong; it flies in the face of a mounting body of evidence that underscores the fact that well-designed instructional programs for struggling adolescent learners in middle and high school can bring about dramatic changes in literacy attainment.

The following two examples illustrate this claim. They have been chosen to show some of the exciting results that can happen in individual classrooms, and across entire schools, in terms of improving the literacy performance of struggling adolescent learners.

Example 1: Midwest Middle School—Dubuque, IA

The Problem: A group of sixth-grade students with learning disabilities who were reading 2 to 3 years behind grade level were showing no signs of progress from the beginning of the school year in August to November.

Toward a Solution: Because instructional time was limited, a decision was made to change the type of reading instruction these students were receiving. An evidence-based program (*Fusion Reading*) designed by researchers at the University of Kansas Center for Research on Learning was adopted. This program taught students a targeted number of high-leverage learning strategies to improve their ability to decode difficult words, read fluently, master discipline-specific vocabulary, and comprehend complex reading assignments. The teacher received appropriate professional development and follow-up coaching. Students received 60 minutes of instruction daily. The program was taught with high fidelity.

The Results: Six months after instruction began, all students showed growth on their Measures of Academic Progress scores and 83 percent of them met their target growth goal. The gains that they made were statistically significant (.004) with large effect size gains (1.71). Overall, these students are approaching the mean score range for the norm group. This means that the achievement gap for reading is closing in a dramatic fashion. With the new skills these students are acquiring, they will be able to enroll in rigorous classes because they can independently navigate and cope with the demands of their reading assignments.

Example 2: J.E.B. Stuart High School—Falls Church, VA

The Problem: In the early 2000s, J.E.B. Stuart High School was labeled a “failing school” because of its poor academic record. The passing rates on the State assessment were as follows: Reading: 64 percent, Algebra I: 32 percent, Chemistry: 44 percent, and History: 27 percent. Stuart High has an enrollment of 1,500 students. The student body has a 30 percent mobility rate, 70 percent of its students were born outside of the United States, 25 percent are English Language Learners, 13 percent have disabilities, 86 percent are from minority backgrounds, and 54 percent qualify for free or reduced-price lunch.

Toward a Solution: After looking at the poor record of student achievement, all of the educators at Stuart High School knew that drastic changes had to occur to give their students a chance to graduate and be college- or career-ready. High expectations were set, and a host of measures were put in place to change the culture and prevailing practices within the school, including a heavy emphasis on explicit vocabulary and comprehension instruction, ongoing discussions related to text, intensive strategic tutoring, multi-tiered interventions, extended learning time, heavy use of technology, and shared leadership. A core belief of the entire staff was that reading proficiency of every student was essential if they were to benefit fully from their high school education and become career- and/or college-ready. Hence, all teachers and administrators at Stuart High proudly say that they spell hope “R-E-A-D.”

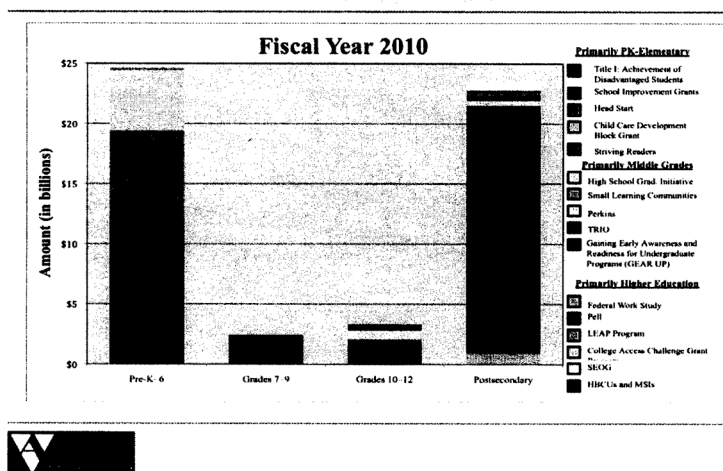
The Results: Over a 5-year period, dramatic improvement was seen on virtually every indicator, each directly tied to the significant improvement in the core literacy skills of the student body. Specifically, on the State assessments, the pass rates became as follows: Reading: 94 percent; Algebra I: 98 percent; Chemistry: 88 percent; and History: 96 percent. The International Baccalaureate (IB) enrollment increased from 18 to 48 percent, and the school exceeded the international average pass rate. Student performance never dropped below 80 percent. In other words, a school with

high poverty, high diversity, 70 percent second language, and a 30 percent mobility rate outperformed elite private schools on the IB examinations.

FEDERAL POLICY RECOMMENDATIONS

Reauthorization of ESEA represents an opportunity to make a long overdue course correction in the proportion of Federal investments that have historically gone to adolescents in middle and high school settings. As shown in Figure 1, Federal education policy has long overlooked grades 7–12. As illustrated, early investments and post-secondary investments each total about \$25 billion annually. However, investments made to bolster the educational achievement of adolescents in middle and secondary schools are each under \$4 billion annually. The Alliance for Excellent Education refers to this as “the missing middle” (Miller, 2009).

Figure 1.



Investments in America's youngest children should continue to be a high priority as ESEA is reauthorized. But these investments should not be made at the expense of the needs of older children. An econometric model developed by Nobel Laureate James Heckman (an economist from the University of Chicago) demonstrates that with no investments at all, high-risk children will attain a graduation rate of 41 percent. With early investments alone, the graduation rate rises to 66 percent. However, when investments are made from early childhood through adolescence, the predicted graduation rate rises to 91 percent!

Large numbers of our country's adolescents are on a trajectory that is leading them to dropping out of school and/or entering the work force grossly ill-prepared to obtain and keep employment that will support them and their families. Traveling on this trajectory will greatly enhance their probability of ending up in jail, divorcing, and not being a contributing member of their community. While the adolescents on this trajectory differ in many ways, most of them have one thing in common: *they lack the necessary literacy skills to successfully navigate the complex world in which they find themselves.* One of the primary roles of public policy is to put in place programs and structures that will address problems that disadvantage individual citizens and as well as our Nation as a whole. Public policy intervention is needed to reverse the poor literacy performance evidenced by many adolescents. The lives of these students and the economic vitality of our country will be the beneficiaries.

The following recommendations are designed to dramatically alter the path that too many of our struggling adolescent learners are on.

• **Recommendation #1: Increase funding for middle and high schools.** The neglect of financial support for students in grades 7–12, compared to the earlier grades, that currently and historically has existed, must be reversed immediately. Without such investments, serious progress in turning around low-performing secondary schools, dramatically reducing the current dropout rate, and making more students career- and college-ready will not occur.

• **Recommendation #2: Support current legislative initiatives related to adolescent achievement.** Three bills currently before the Congress would favorably impact adolescent academic performance. The support of each would create a context conducive to significantly moving the needle on the adolescent literacy problem. First, the conceptual framework embodied within the “Literacy Education for All, Results for the Nation Act” or LEARN Act is sound and deserves strong support. The pre-K through 12 comprehensive nature of this proposed act affords schools the opportunity to put in place a literacy plan that is coordinated and integrated across all grade levels. As such, it recognizes that literacy instruction is, indeed, necessary at all age levels, not just the earlier ones.

Second, the Graduation Promise Act would support State-led systems for high school accountability and improvement. States and school districts would identify low-performing high schools, and a rigorous diagnostic analysis would be used to identify and tailor research-based reforms to turn them around.

Third, the Success in the Middle Act is designed to prevent students from becoming dropout statistics through the use of early warning systems that identify at-risk students and offer them support so they continue in school and graduate.

Therefore, it is imperative that all three bills be passed.

• **Recommendation #3: Support the development and adoption of State-led common standards that embed literacy standards throughout the content areas.** Our ability to prepare students to succeed in the marketplace is directly dependent on their ability to meet a set of uniformly high standards. Currently, there is so much variation across State standards that it is impossible to align them to college and career readiness benchmarks. State-led common standards in the core academic areas will result in setting one high bar to ensure that students have sufficient literacy skills to be ready for college and careers. To reach this goal, it is essential that standards within each of the academic disciplines include specific literacy competencies that students must meet.

• **Recommendation #4: Encourage States to develop a comprehensive literacy policy.** To accelerate the rate at which schools embrace and seriously implement measures to improve adolescent literacy outcomes, each State’s education agency must develop a detailed plan to work with districts to help them implement State policies relative to adolescent literacy and then monitor districts’ progress. Among other things, States should identify the reading skills students need in order to improve reading achievement and to meet State standards in key academic subjects through high school.

• **Recommendation #5: Invest in professional development in literacy instruction for current and prospective teachers and administrators and encourage States to revise certification and licensure standards.** Of all of the factors that contribute to positive student outcomes, the competence of the teachers who teach students is most important. That is, student behavior will change only to the degree that teachers possess the essential instructional competencies to enable their learning. Discipline-specific teachers must be prepared to integrate literacy instruction into their content instruction. Similarly, reading and writing specialists must demonstrate competencies in adolescent language and knowledge of explicit, intensive instructional pedagogies and supplemental teaching methods. Finally, school administrators must be prepared to lead school-wide literacy improvement efforts and create the kinds of instructional conditions that promote literacy attainment.

• **Recommendation #6: Invest in ongoing research and evaluation.** In order to close the large achievement gap that exists for struggling adolescent learners and given the shortage of time available to teach them, teachers need evidence-based instructional practices that are more powerful and efficient than the ones currently available. Collectively, the existing research base on adolescent literacy is relatively scant, significantly hindering the headway that needs to be made with struggling adolescent learners.

A sampling of the types of research questions that must be answered include (a) What are the best strategies and/or combination of strategies to use with adolescents demonstrating various learning profiles?; (b) How should instruction be designed to meet the unique needs of adolescents with disabilities and English Language Learners?; (c) How can teacher preparation and professional development programs be reconfigured so secondary-level teachers can efficiently acquire the necessary competencies to infuse literacy instruction into their classes?; and (d) What are the unique issues confronting low-performing rural secondary schools versus low-performing urban schools and what turnaround strategies work best in each setting?

While some investments have been made through IES and NICHD to support research on adolescent learners, these investments have been infinitesimally small

compared to the investments these agencies make in younger children. Thus, few of the proposals submitted to these agencies in adolescent literacy end up being funded. Strategies for engaging larger numbers of researchers to conduct research in adolescent literacy need to be identified and implemented.

CONCLUSION

The dismal literacy attainment of so many of our country's adolescents underscores how critical it is that the newly reauthorized ESEA include measures to address this problem. Education policy that focuses on improving the quality of instruction that takes place in our Nation's classroom can have the most immediate, significant and long-lasting impact on student outcomes. The needle will move on adolescent literacy performance when policies are enacted that call for the use of instructional practices that are grounded in sound research. Keeping this focus in mind will provide a basis for all policy recommendations that follow:

REFERENCES

- Darling-Hammond, L., Wei, R.C., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. Washington, DC: National Staff Development Council.
- Ehren, B.J., Deshler, D.D., & Graner, P.S. (in press). Using the content literacy continuum as a framework for implementing RTI in secondary schools. *Theory into Practice*.
- Elmore, R.F. (2005). *School reform from the inside out: Policy, practice, and performance*. Cambridge, MA: Harvard Education Press.
- Gerwertz, C., (2009). Dropout costs priced for 50 major U.S. cities: The economic benefits of reducing high school dropout rates in America's fifty largest cities. Washington, DC: *Education Week*.
- Greene, J.P., (2000). *The cost of remedial education: How much Michigan pays when students fail to learn basic skills*. Midland, MI: Mackinac Center for Public Policy.
- Greenleaf, C.L., & Hinchman, K. (2009). Reimagining our inexperienced adolescent readers: From struggling, striving, marginalized, and reluctant to thriving. *Journal of Adolescent and Adult Literacy*, 53(1), 4–13.
- Hoy, W.K., Tarter, C.J., & Woolfolk Hoy, A. (2006). Academic optimism of schools: A second-order confirmatory factor analysis. In W.K. Hoy & C. Miskel (Eds.), *Contemporary issues in educational policy and school outcomes* (pp. 135–156). Greenwich, CT: Information Age.
- Kamil, M.L., Borman, G.D., Dole, J., Kral, C.C., Salinger, T., & Torgesen, J. (2008). *Improving adolescent literacy: Effective classroom and intervention practices: A practice guide* (NCEE #2008-4027). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute for Education Sciences, U.S. Department of Education. Retrieved from <http://ies.ed.gov/ncee/wwc>.
- Learning Point Associates, (2006). *Effective use of electronic data systems: A readiness guide for school and district leaders*. Chicago, IL: Learning Point Associates.
- Lee, C.D., & Spratley, A. (2010). *Reading in the disciplines: The challenges of adolescent literacy*. New York: Carnegie Corporation of New York.
- Miller, M. (2009). Seize the moment: The need for a comprehensive Federal investment in adolescent literacy. *Policy Brief*. Washington, DC: The Alliance for Excellent Education.
- National Center for Educational Statistics, (2007). *The Nation's report card: Reading 2007*. Washington, DC: U.S. Department of Education.
- National Governors Association, (2005). *Reading to achieve: A governor's guide to adolescent literacy*. Washington, DC: National Governors Association.
- Roderick, M. (2006). Aligning dropout prevention approaches with efforts to raise achievement and improve high school performance: Evidence from the Chicago Public Schools. In D. Clark (Ed.). *The challenge of high school reform*, 21(2), 12–19. Washington, DC: The Aspen Institute.
- Salahu-Din, D., Persky, H., & Miller, J. (2008). *The Nation's report card: Writing 2007*. Washington, DC: Institute of Education Sciences.
- SREB, (2009). *A critical mission: Making adolescent reading an immediate priority in SREB*. Atlanta: Southern Regional Education Board.
- Torgesen, J.K., Houston, D.D., Rissman, L.M., Decker, S.M., Roberts, G., Vaughn, S., Wexler, J. Francis, D.J., Rivera, M.O., & Lesaux, N. (2007). *Academic literacy instruction for adolescents: A guidance document from the Center on Instruction*. Portsmouth, NH: RMC Research Corporation, Center on Instruction.

The CHAIRMAN. Thank you very much, Mr. Deshler.

Now we turn to Mr. Capozzi.

**STATEMENT OF JOHN CAPOZZI, PRINCIPAL, ELMONT
MEMORIAL HIGH SCHOOL, ELMONT, NY**

Mr. CAPOZZI. Thank you, Chairman Harkin and distinguished members of the committee.

My name is John Capozzi, and I am the principal of Elmont Memorial High School. I would like to thank you for providing me with the opportunity to speak to you about the strategies we use at Elmont Memorial High School to improve teacher effectiveness and provide our students with the rigorous education that prepares them for their post-secondary goals.

Elmont Memorial High School is the largest of five schools in the Sewanhaka Central High School District, with nearly 2,000 students in grades 7 through 12. The demographics of our school are 77 percent African-American, 13 percent Hispanic, 9 percent Asian, and 1 percent White. Our academic achievement and annual graduation rate of over 94 percent has dispelled the myth that children of color cannot be provided with an enriching, challenging, and first-rate education.

I am often asked how Elmont Memorial High School does this. The driving force behind Elmont Memorial's success is our belief that all children can learn.

Research clearly shows that the No. 1 factor in student achievement is teacher effectiveness. We understand that our student success is directly correlated to our highly effective and dedicated teachers. My primary role as the principal is to serve as the instructional leader of the school and to provide support and supervision to the faculty.

The role of the principal has changed dramatically throughout the years. Today, principals are often required to be managers rather than instructional leaders. For student achievement to improve, the principal's primary focus must remain on improving teacher effectiveness.

Recently, there has been much discussion on developing teacher-leaders in schools. At Elmont Memorial, we utilize teacher-leaders to turnkey successful instructional strategies at faculty workshops. Excellent teachers benefit from this plan; however, this alone will not help improve the instruction in the mediocre and poor teacher's classrooms.

Principals and school administrators must take the lead in helping teachers develop their pedagogical skills. In order for a principal to be an effective instructional leader, they must first be a master teacher. A master teacher analyzes data and differentiates instruction. A mediocre teacher simply examines data and re-teaches the material. A poor teacher does not examine the data and continues on to the next topic. A master teacher develops lesson plans that are responsive to the different learners in their classrooms. A mediocre teacher simply looks at content as the foundation of lesson planning. A poor teacher does not have the skill set to plan effectively.

Principals must be well-versed in pedagogy and be willing to work hands-on with their teachers to develop schools where excellent instruction is the standard. At Elmont Memorial, three areas

that have greatly contributed to our success are our rigorous observation process, our comprehensive professional development plan, and our strong collaborative approach.

The primary goal of our observation process is to improve instruction and student achievement. This process is a cooperative undertaking between the instructional supervisor and the teacher. As the principal and the instructional leader of Elmont Memorial, my role in the observation process is, first and foremost, to be a teacher of teachers.

At the start of every school year, we develop and implement a comprehensive professional development plan based on the needs of our teachers. Additionally, to enhance the social and academic growth of our students, we utilize interdisciplinary teams. Our teaming program provides our teachers with a daily opportunity to collaborate on instructional practices and to develop intervention plans to meet the needs of the students.

Our success in identifying at-risk students and providing them with the necessary instructional support has greatly contributed to Elmont Memorial High School's high graduation rate. We have developed and implemented an action plan. This allows us to be proactive in identifying at-risk students.

In 2009, New York State had 56 percent of African-Americans and 55 percent of Hispanic students graduate from high school. At Elmont Memorial High School, 94 percent of African-American and 95 percent of Hispanic students graduated. Ninety-seven percent went on to college. This demonstrates the power of teacher effectiveness to positively impact student achievement.

As a Nation, we must commit ourselves to provide all students with the highest quality education. It is my sincere hope that the reauthorization of the Elementary and Secondary Education Act will not only raise standards for public education, but also provide principals with the resources they need to develop and hone the skills of our most valuable educational resource: teachers.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Capozzi follows:]

PREPARED STATEMENT OF JOHN CAPOZZI

SUMMARY

With nearly 2,000 students, a student body comprised of 77 percent African-American, 13 percent Hispanic, 8 percent Asian and 1 percent white, Elmont Memorial High School has proven that all children can achieve academic success regardless of race, creed, ethnicity or socio-economic status. We understand that our students' success is directly correlated to highly effective and dedicated teachers. Research clearly shows that the No. 1 factor in student achievement is teacher effectiveness. My primary role as the principal is to serve as the instructional leader of the school and to provide support and supervision to the faculty.

At Elmont Memorial, we continually analyze teacher effectiveness. Three areas that have greatly contributed to improving classroom instruction are a rigorous observation process, a comprehensive professional development plan, and a strong collaborative environment. The goal of our process is to improve classroom instruction and student achievement. At the start of every school year we develop and implement a comprehensive professional development plan based on the needs of our teachers. The thrust of our professional development plan is assisting teachers to develop differentiated instructional methodologies that allow them to meet the various needs of their students. Additionally, to enhance the social and academic growth of our students, we utilize interdisciplinary teams. Our teaming program provides our teachers with the opportunity to collaborate on a daily basis.

Our success in identifying and supporting at-risk students has greatly contributed to Elmont Memorial High School's high graduation rate. We have developed and implemented an A.C.T.I.O.N. Plan (Analysis, Collaboration, Teaching techniques, Instructional support, Opportunities for success, Needs of the students) that allows us to be proactive in identifying at-risk students. Once identified, individualized academic recovery plans are developed, implemented and monitored. As a result, students are afforded an opportunity to experience academic achievement.

Our success at Elmont Memorial is built on the foundation of teacher effectiveness and individualized assistance for all of our students. This, coupled with administrative leadership that embraces these factors enables us to provide our students with the best education possible.

Thank you Chairman Harkin, Senator Enzi, and distinguished members of the committee. I am John Capozzi, Principal of Elmont Memorial High School. I would like to thank you for providing me with the opportunity to speak to you about the strategies we use at Elmont Memorial High School to improve teacher effectiveness and provide our students with a rigorous education that prepares them for their post-secondary goals.

Elmont Memorial School is the largest of five schools in the Sewanhaka Central High School District with nearly 2,000 students in grades 7 through 12. The demographics of our school are 77 percent African-American, 13 percent Hispanic, 9 percent Asian and 1 percent white. Our academic achievement and annual graduation rate of over 94 percent has dispelled the myth that children of color cannot be provided with an enriching, challenging and first rate education. I am often asked how Elmont Memorial does this. The driving force behind Elmont Memorial's success is our belief that all children can learn. Research clearly shows that the No. 1 factor in student achievement is teacher effectiveness. We understand that our students' success is directly correlated to our highly effective and dedicated teachers. My primary role as the principal is to serve as the instructional leader of the school and to provide support and supervision to the faculty.

The role of a principal has changed dramatically throughout the years. Today, principals are often required to be managers rather than instructional leaders. For student achievement to improve the principal's primary focus must remain on improving teacher effectiveness. Recently, there has been much discussion on developing teacher leaders in schools. At Elmont Memorial, we utilize teacher leaders to turnkey successful instructional strategies at faculty workshops. Excellent teachers benefit from this plan. However, this alone will not help improve the instruction in the mediocre and poor teacher's classroom. Principals and school administrators must take the lead in helping teachers develop their pedagogical skills. In order for a principal to be an effective instructional leader, they must first be a master teacher. A master teacher analyzes data and differentiates instruction. A mediocre teacher simply examines data and re-teaches the material. A poor teacher does not examine the data and continues on to the next topic. A master teacher develops lesson plans that are responsive to the different learners in their classroom. A mediocre teacher simply looks at content as the foundation of lesson planning. A poor teacher does not have the skill set to plan effectively. Principals must be well-versed in pedagogy and be willing to work hands-on with their teachers to develop schools where excellent instruction is the standard.

At Elmont Memorial, three areas that have greatly contributed to our success are our rigorous observation process, our comprehensive professional development plan and our strong collaborative approach. The primary goal of our observation process is to improve classroom instruction and student achievement. This process is a cooperative undertaking between the instructional supervisor and the teacher. As the principal and instructional leader of Elmont Memorial, my role in the observation process is first and foremost, to be a teacher of teachers. At the start of every school year, we develop and implement a comprehensive professional development plan based on the needs of our teachers. Additionally, to enhance the social and academic growth of our students, we utilize interdisciplinary teams. Our teaming program provides our teachers with the daily opportunity to collaborate on instructional practices and to develop intervention plans to meet student needs.

Our success in identifying at-risk students and providing them with the necessary instructional support has greatly contributed to Elmont Memorial High School's high graduation rate. We have developed and implemented an A.C.T.I.O.N. Plan (Analysis, Collaboration, Teaching techniques, Instructional support, Opportunities for success, Needs of the students) that allows us to be proactive in identifying at-risk students. Once identified, individualized academic recovery plans are developed, implemented and monitored. Additionally, our pupil personnel counselors play a sig-

nificant role in providing academic support to our students. By conducting an annual review of every student, counselors assist students in formulating goals for each school year and plan for their post-secondary education. As a result, students are afforded an opportunity to experience academic success.

In 2009, New York State had 56 percent African-Americans and 55 percent Hispanic students graduate from high school. At Elmont Memorial High School, 94 percent of African-American and 95 percent of Hispanic students graduate. This demonstrates the power of teacher effectiveness to positively impact student achievement. As a nation we must commit ourselves to providing all students with the highest quality education. It is my sincere hope that the reauthorization of the Elementary and Secondary Education Act will not only raise the standards for public education but also provide principals with the resources they need to develop and hone the skills of our most valuable educational resource—teachers.

The CHAIRMAN. That's pretty amazing. That's over 9 out of 10 going to college.

Mr. Harrison.

STATEMENT OF RICHARD HARRISON, MIDDLE SCHOOL DIRECTOR, DENVER SCHOOL FOR SCIENCE AND TECHNOLOGY, DENVER, CO

Mr. HARRISON. Thank you, members of the committee, for the opportunity to share with you Denver School of Science and Technology's vision and program in the context of reauthorization.

In Denver, our team of educators at DSST looks to double the number of students going to 4-year colleges and universities without remediation from Denver public schools. It is my hope that DSST's charter school model can be replicated to improve our expanding network of schools in Denver, as well as shape the direction of national secondary school reform.

DSST Public Schools looks to drastically change the outcomes for young people in the city of Denver and model the reform necessary to increase student achievement and prepare all students for 4-year colleges and universities. DSST Public Schools currently operate open-enrollment, STEM-focused charter schools. Currently in our middle school and high school program, 48 percent of the students are from low-income households, and we are 68-percent minority. We attract a diverse student population that mirrors the general population of Denver.

For 3 years in a row, DSST's graduating classes have earned 100-percent acceptances into 4-year colleges and universities; and, thus far, our college remediation rate is 7 percent. Over the last 3 years, DSST has been the highest performing high school, as measured by the Colorado State growth model. Locally, according to the district's School Performance Framework, DSST's Middle and High School Program was the highest performing school in Denver Public Schools in both growth and absolute performance. Most importantly, DSST has demonstrated that all students, regardless of race or income, can earn a rigorous high school diploma and attend 4-year colleges and universities.

Our status as a charter school, as well as our focus to meet the academic and social needs of a diverse population, has allowed for innovation in the areas of school culture, student support, and instructional approach. Preparing every student to succeed in academics and in character in a 4-year college is at the center of DSST's program. This starts in the middle school. Our sixth-graders spend a full day at Colorado College, a top-rated liberal arts

college. Our seventh-graders spend a full day working with students and professors at the University of Colorado School of Engineering. These are yearly school rituals that form the mind set of 100 percent college readiness at the student level.

DSST has created a STEM program that engages students and prepares them to succeed in college. Every student in the middle school spends 2 hours each day in our literacy block, devoting extra time for reading, writing, and nonfiction studies in non-tracked classes. The expectation of our middle school math curriculum is designed to take all students to calculus by their senior year. We also provide additional instruction for reading recovery and math interventions for the many students who come to our school grade levels behind. This is necessary if we are to prepare our students for STEM fields and make it accessible.

Of our first two graduating classes, we believe 47 percent have chosen STEM fields in college, considerably higher than the national average of 14 percent. DSST's status as a charter school has allowed for a democratic open-enrollment process so that any student, regardless of academic ability, neighborhood, or background can apply for admission through our lottery process. Most traditional urban public schools suffer from a *de facto* segregation based on income and neighborhood housing patterns.

Under the leadership of Senator Bennet, the former superintendent of DPS, Denver has recently emerged as one of the more promising cities for education reform efforts. Denver Public Schools has aggressively supported the expansion of charter schools.

We would like to present three recommendations for this committee:

No. 1, create more high-performing secondary schools in every neighborhood, regardless of their classification as district or charter schools, that meet the needs of our Nation's diversity.

No. 2, acknowledge the innovative work of high-performing charter schools that serve underrepresented and diverse groups of students, and involve them in the secondary school reform effort.

No. 3, encourage charter schools and district schools, working together, to share in innovation around increasing student achievement and college readiness, and promoting choice and demand of high-performance schools.

On behalf of Denver School of Science and Technology and Denver Public Schools, and in recognition of National Charter School Week, I thank you for the opportunity to share, and welcome further dialogue around the needs of our students.

[The prepared statement of Mr. Harrison follows:]

PREPARED STATEMENT OF RICHARD HARRISON

INTRODUCTION

Thank you Chairman Harkin, Senator Enzi, and members of the Health, Education, Labor, and Pensions Committee for the opportunity to share with you Denver School of Science and Technology's (DSST) vision and program in the context of Elementary and Secondary Education Act reauthorization and the goal of ensuring that every student in every classroom achieves at the highest levels. In Denver, CO, our team of educators at DSST has taken on the task of redefining a world class secondary school program that looks to double the number of students going to 4-year colleges and universities without remediation from the city of Denver. It is my hope that DSST's program can be replicated to improve our expanding network of schools in Denver as well as shape the direction of Secondary School reform.

ISSUES FACING SECONDARY SCHOOL REFORM: NATIONAL AND LOCAL CONTEXTS

With the election of President Obama and the work around the Elementary and Secondary Education Act reauthorization, a dynamic national landscape for school reform has developed. Charter schools are becoming recognized as high quality organizations which successfully educate our Nation's young people. Within this broader context, the United States has been struggling to improve student achievement over the last decade. Student achievement trends and 4-year college-going rates continue to be a significant national problem that will undermine future economic and civic growth of the country. A national crisis persists around successfully educating our population and graduating students from 4-year colleges—particularly low-income and minority students.

Denver Public Schools currently faces many of the same challenges of other large urban districts. Many schools are segregated by race and income. The district is challenged by a high rate of poverty and a large percentage of students who are not native English speakers. The data around college readiness calls for a sense of urgency around secondary school reform:

- Out of 6,310 9th graders in Denver Public Schools in 2004, 612, or 9.7 percent are likely to earn a 4-year college degree within 10 years;
- Of 4,164 low income 9th graders in Denver Public Schools, 186, or 4.5 percent are likely to earn a 4-year college degree within 10 years.

These numbers in Denver are directly tied to the level of college readiness in middle school, where one in three students is meeting State standards in reading, writing, math, and science by the end of 8th grade.

There are very few highly successful one-track college preparatory school models in the country today that significantly increase student achievement in the context of truly diverse populations. In response to this crisis, DSST Public Schools looks to drastically change the outcomes for young people in the city of Denver and model the reform necessary to increase student achievement and prepare students for 4-year colleges and universities.

DSST PUBLIC SCHOOLS: BACKGROUND AND HISTORY

DSST Public Schools currently operate open-enrollment STEM-focused charter schools. We are part of the Denver Public Schools system.

What sets us apart from urban charter schools, traditional district schools, and magnet schools is the rich student diversity of our program. Currently in our middle and high school, 48 percent of the students are from low-income households, and we are 68 percent minority—we are excited to attract a diverse student population that mirrors the general population of Denver. We draw from over 100 different elementary and middle school programs in our open-enrollment process. Our students learn to thrive in a diverse environment, which is a valuable asset that equips them to enter college, the workplace, and the real world.

Through a network of schools, DSST Public Schools is dedicated to providing a diverse student body with an outstanding secondary liberal arts education with a science and technology focus. By creating powerful learning communities centered on core values and a shared commitment to academic excellence, we will increase the number of underrepresented students (girls, minorities and economically disadvantaged) who attain college science and liberal arts degrees. Our graduates will be responsible, engaged citizens who are prepared to be leaders of the future.

Denver School of Science and Technology welcomed its first class of 9th graders in 2004 and has since become one of the most successful high schools in the State of Colorado. DSST added a middle school program to its model in 2008. For 3 years in a row, DSST's graduating classes have earned 100 percent acceptances into 4-year colleges, and our college remediation rate thus far is 7 percent. DSST has been the highest performing Colorado public high school over the last 3 years as measured by value-added student achievement growth on the Colorado State Growth Model. Locally, DSST's Middle and High School program was the highest performing Denver Public School according to district's School Performance Framework.

DSST's middle and high school program has consistently been the highest performing secondary school in the district in both growth and absolute performance. Most importantly, DSST has demonstrated that all students, regardless of income, background, or ethnicity, can earn a truly rigorous high school diploma and attend a 4-year college. As a result, DSST has become a national model for school reform, hosting thousands of educators from all over the country.

Unlike most districts, the reform effort in Denver is defined by the collaboration between district and charter schools. DSST's secondary schools will help Denver

Public Schools to become a truly integrated school system—a national model for such efforts.

INTRODUCTION: DSST'S SECONDARY SCHOOL PROGRAM

DSST's secondary program mirrors the recommendations and focus points in the Elementary and Secondary Education Act. DSST is a unique charter school and offers a distinctive value proposition based on serving diverse students, a 100 percent 4-year college acceptance track record, data-driven instruction that yields high value-added student growth, and our STEM focus.

- **100 percent 4-year college readiness and acceptance focus:** Every aspect of our secondary school program is designed to prepare students to succeed academically and socially in the context of 4-year colleges. Preparing every student to gain acceptance to and succeed in a 4-year college is at the center of DSST's academic program, and work towards this goal starts the minute a student walks in the door for summer school in the 6th grade year. In June 2009, Education Secretary Arne Duncan spoke at the National Alliance for Public Charter Schools Conference.

The Denver School of Science and Technology serves grades 6 to 12. They take the 6th graders on college visits. Those children spend years choosing a college—instead of months—and 100 percent of their graduates go on to 4-year colleges and universities.

From Summer School in the 6th grade through Senior Project, students strive to master the standards, knowledge, and skills that will prepare them for a 4-year college or university without remediation.

- **Real-Time Data-Driven Systems That Yields Value-added Student Growth:** Identifying the value-added growth is the most important metric of student learning. DSST is committed to using data and up-to-date research to inform, reflect upon, and adapt instruction to meet student needs. DSST relentlessly focuses on the academic growth of our students. The result of this focus is outstanding student growth year-to-year as measured by State and nationally norm referenced tests. Most schools that use data-driven instruction places the data in the hands of select teachers and school leaders a few times a year. At DSST, every teacher uses technology to transform teaching and learning, harnessing powerful assessment and data tools to measure student progress towards standards on a daily basis and to adapt instruction accordingly. Teachers develop strategies to spiral and re-teach standards on which students, both individually and collectively, have not achieved mastery. Students use trackers to manage their own data and progress toward standards on a daily basis as well. Thus, they own the data, are fully transparent as to what they need to study and review, and own their progress toward grade level mastery. Even 6th graders at DSST keep track of their data on mastery checks, tests and quizzes, and benchmark exams in their notebooks.

- **STEM (Science, Technology, Engineering and Mathematics):** Young adults who are well-educated in STEM are critical to the functioning of our democracy in our increasingly technological society and represent the next generation of economic growth in the innovation economy. DSST fully realizes that a college preparatory STEM education has to start with a middle school program. We work to develop a strong literacy foundation and laser-like focus on math conceptual understanding and demonstration of skills, and investing the necessary time in reading recovery and math interventions for the many students who come to our program grade levels behind. The expectation of our math curriculum is designed to take all students to calculus by their senior year. In the middle school program, every student takes an hour and a half of an integrated science sequence each day; in the high school, all students take the equivalent of 5½ years of science as part of their graduation requirement. Our one-to-one laptop program also drives our teaching and learning. DSST has a requirement that every student pass every core academic course that they take and our graduation requirements exceed Colorado's higher education entrance requirements. DSST has created a rigorous core curriculum and STEM program that engages students in the field and prepares them to succeed in STEM college majors. We anticipate that 47 percent of our students will go into STEM fields in college, considerably higher than the national average of 14 percent.

A DEMOCRATIC OPEN-ENROLLMENT PROCESS—CREATING CHOICE AND DEMAND IN OUR PROGRAM

DSST's status as a charter school has allowed for a democratic open-enrollment process so that any student, regardless of academic ability or background, can apply for admissions through our lottery process. This is a unique and important element of DSST as we enroll a truly diverse student population in terms of both income

and race. Most traditional urban public schools suffer from a *de facto* segregation based on income and neighborhood and housing patterns.

However, DSST is in a relatively unique and fortunate position of operating in a city that is becoming more diverse. As a result, DSST has the opportunity to serve ethnically and economically diverse student populations. One reason for the unprecedented level of cooperation and support from Denver Public Schools is the District's interest in developing more diverse, high-performing schools, and meeting the demand for these schools—as a note, DSST Public Schools had over 1,500 applications for 400 available seats in our 6th and 9th grade entry points in our schools. Within Denver's secondary school reform movement, there is widespread public belief that DSST's model reflects the world in which students will live and work. This model has greater long-term potential to transform public secondary school reform as students, regardless of race, income, or geography, have access to high performing and high-growth schools. As we expand to a network of schools in Denver, DSST—through parental and student choice—has the opportunity to reintegrate Denver schools.

DSST'S CORE PRACTICES: INNOVATION, AUTONOMY, AND DIVERSITY

Our student outcomes can be attributed to innovative strategies that have guided the organization over the first 6 years. DSST's guiding principles mirror the direction our Nation looks to take through the Elementary and Secondary Education Act. DSST believes that all students can learn, and that it is the responsibility of educators to ensure that students achieve. Our operating principles permeate every aspect of our work. We are mission- and values-focused, and our success lies in the development of highly effective people. We are outcomes-focused, relying on purposeful use of real-time data. Our organization is committed to innovation and excellence. Most importantly, our status as a charter school as well as our focus to meet the academic and social needs of a diverse population has allowed for innovation in the areas of school culture, instructional approach, and supporting our student population. Learning is at the core of our organization. We constantly seek to find out why things work, how we can do them better, and we never stop learning.

Our school culture is grounded in our school's six core values: Respect, Responsibility, Integrity, Courage, Curiosity, and Doing your Best. Our school culture is defined by our approach with young adults through these values. We hold high expectations for all students, and insure that our educators will do whatever it takes to enable students to meet these high standards. In DSST's high-accountability culture, doing your best is a core value, and doing well in school is "cool." Students are individually known and cared for, and they are held accountable and challenged to do their best. This high-accountability culture includes:

- Recognizing that every group of people implicitly operates based on a set of values, whether defined or not, DSST defines the values of our community with 100 percent clarity and purpose, leaving little to be defined unintentionally. Our core values form the heart of the DSST community. We gather as a school community to share in reflection, praise, and acknowledgement of our collective direction.
- DSST was founded on the premise that the common good of our community has far more value than the pervasive "individualistic" culture teenagers live in today. An intentional shared community not only challenges students to think of others, but it also contributes to their sense of belonging to something much larger than themselves. DSST's rituals and routines, including our community morning meetings, promote a sense of belonging and common purpose that guide all students, faculty and staff.
- A required after-school study hall for students who have not completed their homework.

DSST believes that every student learns differently and that our classroom instruction must accommodate diverse abilities and learning styles. Rather than adhering to a single teaching philosophy or instructional model, DSST has tapped deeply into cutting-edge brain research to ensure that teachers are using the most effective strategies possible to attain maximum student growth and achievement. With brain research as a foundation, DSST also draws on the best practices from the field, visiting high-performing schools across the country, and then piloting practices in our own classrooms to define a set of *DSST Core Instructional Practices*. This balanced pedagogical approach, both incredibly progressive and surprisingly traditional, maximizes growth and achievement for all students. *DSST Core Instructional Practices* include:

- Planning Lessons in 10-minute time segments and using hooks and real-world connections to maximize student engagement.

- Using Differentiation to reach diverse learning styles and abilities in non-tracked, heterogeneous classrooms.
- Spiraling and fluency activities that provide the repetition necessary to move new learning into long-term memory and to maintain previously learned concepts and skills.
- Multi-sensory classroom approaches to improve access and retention.

DSST realizes the challenges of supporting the needs of a diverse student population, particularly the at-risk. The more deeply a student is known and cared for, the more effectively a student can be challenged to learn and grow. At DSST all students are known deeply enough that teachers and staff in the building can personally care for them and hold them accountable so that they can realize their full learning and developmental potential. Clear expectations are communicated, and strong systems of accountability are in place to help students meet our high expectations. DSST provides an academic advisor for every student, who monitors student performance and maintains regular communication with parents and guardians; the advisor also works to build meaningful connections necessary to reflect on student progress academically, as well as with the development of character and expressions of core values. Our student support is defined by the combination of our focus on building relationships and our intervention systems. We provide:

- Mandatory after-school tutoring, where our teachers work with students who fail a quiz or test;
- Math and English summer school for students who have not mastered grade-level skills.
- Math and English support classes that students must take, in addition to their regular courses, until they master basic fluency skills.
- Weekly recognition of students for academic effort and success.

PARTNERSHIP WITH DENVER PUBLIC SCHOOLS: A MODEL FOR URBAN EDUCATION REFORM

DSST has the opportunity to dramatically impact K–12 education in Denver. DSST's ultimate goal is that Denver becomes the national leader of urban public education, as indicated by: (1) dramatically increasing the percentage of college-ready students from all backgrounds; (2) rigorous STEM education and programs that make Denver the national urban leader of science education; and (3) racially and socioeconomically diverse college preparatory schools that reflect today's workplace and society.

To achieve these outcomes, Denver Public School (DPS) Board approved charters for four additional DSST 6–12 schools. By 2020, DSST Public Schools' five schools will be fully enrolled with over 4,000 students, will graduate approximately 500 students per year and will double the number of college-ready students from DPS matriculating to 4-year college each year (from 500 today to 1,000). DSST Public Schools will serve 10 percent of DPS's 6th through 12th grade population, but graduate the same number of college-ready graduates. And 100 percent of DSST Public Schools' graduates will be prepared to succeed in STEM fields of study.

Securing financially viable facilities and funding meaningful professional development are great challenges for charter schools. DSST Public Schools has developed a strong pro-active strategy to deal with this issue, but must successfully execute the strategy. DSST has a written commitment from the Superintendent of DPS that DPS will provide leased facilities to DSST Public Schools for all four of the growth campuses and has already assigned DSST to a new DPS building for its second campus. DSST hosts many DPS teachers and school leaders on learning walks, and over the last 2 years hosted the Denver Teaching Fellows Program through The New Teacher Project. Taking our partnership to the next level, DSST will be submitting an i3 grant with Denver Public Schools. In this grant, DSST will be sharing the DNA of our innovative instructional model with the district to impact student achievement in several schools across the city.

Under the leadership of Senator Bennet, the former Superintendent of Denver Public Schools, Denver has recently emerged as one of the more promising cities for education reform efforts. Denver Public Schools has aggressively supported the expansion of charter and innovation schools, begun to create a pay-for-performance compensation system, has opened up facilities to charter schools, and created school performance metrics to measure a variety of value-added student achievement data.

Within this promising context, however, district student achievement continues to suffer. By any measure, Denver is failing to educate an entire generation of young people, which will have long-term consequences for our city and State. Today, 49 percent of DPS students graduate high school, and of those that do, less than 45 percent are academically prepared for college. There is an acute shortage of high

performing secondary schools in Denver. As the Obama administration seeks to scale effective practices at a pace never seen before, DSST, together with DPS, is positioned to build a national model partnership that will expand impact and support positive change throughout a large urban district.

CONCLUSION

There is much debate in our Nation about how to improve our public schools. This is a critical conversation for many constituents as the stakes could not be higher. We suggest a simple guiding principle to guide the conversation: center the conversation around what kids need. Every student in every neighborhood deserves a high-performing school, so we simply must debate the quality of our schools first. Our Nation's policy must strongly favor having more high-performing schools in every neighborhood—regardless of their classification—district or charter school.

There is nothing more important to our Nation's future than improving our public education system. The health of our democracy, the social and civic fabric of our communities, and the Nation's economic future depend upon it. Providing all students from all backgrounds and incomes with an outstanding K–12 education and the academic preparation to go to college without remediation should be the singular focus of the reauthorization of the Elementary and Secondary Education Act.

As charter school leaders, we recognize that charter schools are one of many strategies to accomplish this goal. We do not believe that charter schools are the only path to take. Traditional district schools and alternative schools all have an important role to play in dramatically improving our Nation's public secondary education. Instead of using different governance or management structures of public schools to divide and distract our efforts to educate all students, we should be encouraged that there are multiple strategies that our districts can use to insure a great education for all students, and focus on the results that each teacher, school and district achieve for their students. This is one of many reasons why charter schools are a critical component of our education reform strategy.

As the Nation seeks to improve student outcomes in STEM and increase the pipeline of well-prepared students entering STEM fields, DSST Public Schools has much to offer these efforts through advocacy and the sharing of a proven model. We would like to present the three recommendations based on DSST Public School's work with the Denver Public Schools for the re-authorization of the Elementary and Secondary Education Act:

- Create more high-performing secondary schools in every neighborhood—regardless of their classification as district or charter schools—that meet the needs of our Nation's diversity;
- Acknowledge the innovative work of high growth and high performance charter schools that seek to serve under-represented and diverse groups of students on the track to a 4-year college or university, and involve them in the secondary school reform effort;
- Encourage charter schools and district schools working together to share in innovation around data-driven instruction, increasing student achievement and college readiness, and promote choice and demand of high performance schools.

On behalf of Denver School of Science and Technology and Denver Public Schools, I thank you for the opportunity to share, and welcome further dialogue around the needs of our students.

The CHAIRMAN. Thank you very much, Mr. Harrison.
Now Ms. Webber-N'Dour.

STATEMENT OF KAREN WEBBER-N'DOUR, PRINCIPAL, NATIONAL ACADEMY FOUNDATION HIGH SCHOOL, BALTIMORE, MD

Ms. WEBBER-N'DOUR. Thank you.

The CHAIRMAN. Did I pronounce that correctly?

Ms. WEBBER-N'DOUR. "Indoor." Opposite of "outdoor."

[Laughter.]

The CHAIRMAN. All right.

Ms. WEBBER-N'DOUR. Good afternoon. My name is Karen Webber-N'Dour. I am the principal of the National Academy Foundation High School, in Baltimore, MD. I am also a career academy graduate. Thank you for giving me the opportunity to be here today

on behalf of my school, the National Academy Foundation (NAF), and the career academy movement.

I am here today to tell you about the success of my school and thousands of other schools like it and why you should make sure that we continue and, in fact, expand our mission.

The students at my school, NAF High School, have experienced unprecedented success. We are currently ranked as the sixth-best high school in Baltimore City, and admission is open to all students. For the past 4 years, 100 percent of our seniors have graduated, and 100 percent of our students have been admitted to college. For the past 3 years, our attendance rate has averaged over 90 percent. Our high academic standards have also led to impressive gains on our State achievement tests and we have closed the "achievement gap" among our increasingly diverse student body.

Last year, our 12th graders scored almost 20 percentage points higher than the city average on both the English and algebra assessments. I believe the time is right to look at what career academies can do for more of our schools and more of our students. Career academies are one of the most established, prevalent, and well-researched models for reforming high schools.

Career academies can be charter schools, parochial schools, or traditional public high schools, but they must have three essential components. A career academy is structured as a small learning community. A career academy uses college preparatory curriculum, focused on a specific career, such as finance. A career academy gives students access to a wide range of work-based learning experiences, such as internships and job shadowing.

The National Academy Foundation model also adds one additional component. The NAF requires each academy to have an advisory board, which formalizes the relationships between local businesses, higher education, community groups, and the school.

It has been my experience that many students with varying levels of academic performance can dramatically benefit from this type of personal attention and curriculum that is career-focused. To this point, the NAF Academy model supports open recruitment. Any young person who wants to enroll can do so. So we, therefore, attract both high- and low-performing students, but both groups become successful under this model.

My high school is a wall-to-wall academy school. It serves 400 students in five career-themed academies. The academies focus on finance, hospitality and tourism, information technology, engineering, and law. We also use living classrooms. In other words, we try to apply what is learned in the classroom to a real-world situation. Our latest project is to create an entirely student-run cafeteria.

Our finance students won a MECU branch in our school. It is an actual bank. The MECU branch is a real living branch. You can make deposits, withdrawals, and you can open accounts in our MECU branch. Our students are trained tellers, so they are actually able to run the bank on their own, with supervision.

Once our young people have experiences like these, there is a noticeable shift in the way they carry themselves, and this is really important. When our students have this change in personal behavior, it carries over to the expectations they have of their fellow stu-

students' behavior. I can tell you that this kind of positive peer pressure changes a school's culture indelibly.

I mentioned, earlier, that NAF Academies have advisory boards that formalize relationships between the schools and their local communities. Our board has brought us amazing opportunities. Thanks to connections made through our board, Hilton Hotels created a \$3-million fund for scholarships for Baltimore City high school students. Our National Academy Foundation students receive first priority. These board members' involvement changed lives in a way that will have a ripple effect for generations to come.

Here we are today, the reauthorization of the Elementary and Secondary Education Act. It is a great opportunity to increase the number of career academies nationwide. Career academies are a widely-used school reform strategy, but they are estimated to reach only 5 percent of public high school students. Increased funding is critical to increasing both the quantity and quality of career academies.

This is also an opportunity to promote the teaching methods, that are proven to help students be so successful, and the teacher training that is required to make these changes.

We will also have to develop new ways of testing our students that can measure what they know and what they can do.

It has been said that the NAF Academy model is the best-kept secret in education. I believe this cannot, and should not, continue to be the case. There is an opportunity now to expand it in ways that can help students, schools, businesses, communities, and yes, the government, too, work better.

Thank you for the opportunity to speak today.

[The prepared statement of Ms. Webber-N'Dour follows:]

PREPARED STATEMENT OF KAREN WEBBER-N'DOUR

SUMMARY

Established 40 years ago, career academies are one of the most prevalent and well-researched high school reform approaches, serving approximately 1 million public high school students.

Most significant among the research is a 12-year random-assignment study conducted by MDRC which found that the career academy model can produce substantial, long term improvements in young people's ability to earn money and make a successful transition to adulthood, particularly for young men. It also showed that for the subset of students most at risk of dropping out, career academy participants showed increased school retention through the 12th grade, improved attendance, and earned more credits. The MDRC evaluation meets the Office of Budget Management's PART test, the highest standard for evaluating program effectiveness.

The career academy model contains three essential components: that the academy is structured as a small learning community; that the academy uses college-preparatory curriculum that applies a career-context to learning; and that students access a range of work-based learning experiences such as internships and job shadowing. The National Academy Foundation model also requires an advisory board to formalize the relationships between local businesses, higher education, and community groups and the school. To promote full implementation of the model, in 2004 a coalition of career academy organizations developed the "Career Academy National Standards of Practice," which identify 10 elements of successful implementation of the career academy model.

The National Academy Foundation High School is a small, public high school serving 300 students in five career-themed academies. The Academies focus on Finance, Hospitality & Tourism, Information Technology, Engineering, and Law. National Academy Foundation academies are also successfully implemented as a school-within-a-school in a larger comprehensive high school or as small schools that may only be one academy theme.

Through living classrooms, interactions with experienced professionals, and paid internships, students at the National Academy Foundation High School are prepared for college and career success. Currently ranked as the sixth best high school in Baltimore, the only one of which that is open to all students. For each of the past 4 years, our school has achieved a 100 percent graduation rate and 100 percent of our students have been admitted to college. For the past 3 years, our attendance rate has averaged over 90 percent. Our high academic standards have also led to impressive gains in State achievement tests and we have closed the “achievement gap” among our increasingly diverse student body. Last year our twelfth graders scored almost 20 percentage points higher than the city average on both the English and Algebra 2 assessments.

The reauthorization of the Elementary and Secondary Education Act provides many opportunities to increase the prevalence of career academies and apply key lessons learned to improving high schools for all American young people. Increased funding is critical to increasing their scale and can also ensure quality among all schools that seek to use the model. We also need standards that allow academic and career-themed courses to be integrated, expanding the relevance of coursework and deepening students’ ability to apply core concepts. Alongside promoting these instructional methods must be assessments that measure students’ skills in addition to the knowledge they have gained. These assessments must also be aligned with credentialing opportunities in which students can earn industry certifications or college credits.

Good afternoon Chairman Harkin, Ranking Member Enzi, and members of the committee. I am Karen Webber-N’dour, principal of National Academy Foundation High School, a public high school in Baltimore City, MD. I am proud to be here today on behalf of my school, the National Academy Foundation, and the career academy movement.

I am heartened by the increasing dialogue around the pressing need for American high schools to achieve college and career readiness for every student. I deeply understand this need, both as a high school principal and from my previous work life. I am not a career educator; I am a lawyer by training. After 10 years focusing on civil rights, it was clear to me that a quality education could be the key to the betterment of the disenfranchised populations with whom I was working. I decided to switch tracks to create opportunities for people who otherwise may not have them, and I have found the career academy model an ideal vehicle to do that.

I also have a very personal connection to this movement; I am a career academy graduate. I embarked on my professional path at the Academy of Law, Politics, and Community Affairs at Tilden High School in Brooklyn, NY.

Career academies are one of the most established, prevalent, and well-researched high school reform approaches. This model is time-tested—the career academy movement began 40 years ago in Philadelphia and the National Academy Foundation has been refining its model for nearly 30 years. Today, there are estimated to be between 2,500 and 4,000 career academies across the country, serving approximately 1 million public high school students. Five hundred of these academies are part of the National Academy Foundation’s network and they will reach 53,000 students this school year.

Career academies’ impacts have been demonstrated by rigorous research, including a longitudinal, random assignment evaluation by MDRC. The MDRC study meets high standards set out in the Office of Budget Management’s PART test for evaluating program effectiveness.

Career academies are one of the best examples of how educational interventions can apply research findings to improve practice. The wide range in the estimated number of career academies is due to the fact that many schools or programs with a career theme label themselves as career academies without fully applying the model. To address this and promote full implementation, in 2004 a coalition of career academy organizations developed the “Career Academy National Standards of Practice.” Based on both the experience of the organizations involved and on the MDRC findings, the national standards identify 10 elements of successful implementation of the career academy model.

THE CAREER ACADEMY MODEL

Among local, State and national career academy organizations, it is widely agreed that the career academy model contains three essential components: that the academy is structured as a small learning community; that the academy uses college-preparatory curriculum that applies a career-context to learning; and that through

business, college, and community partners, students access a range of work-based learning experiences such as internships and job shadowing. The National Academy Foundation model adds one additional component, requiring that each Academy has an advisory board to formalize the relationships between local businesses, higher education, community groups and the school.

Academy Structure

Career academies are organized as small learning communities so that students get the benefit of a supportive and personalized learning environment. The National Academy Foundation academy structure also emphasizes recruitment that is open to any young person who expresses interest in the career theme and attracts both high- and low-performing students. It also requires a scheduling and school structure that allows teachers to collaborate across subject areas.

This can take hold in a variety of forms. The high school I lead is what we call "wall-to-wall academies." It is a small high school serving 400 students in five career-themed academies. Four out of the five are affiliated with the National Academy Foundation. The Academies focus on Finance, Hospitality & Tourism, Information Technology, Engineering, and Law. National Academy Foundation academies are also successfully implemented as a school-within-a-school in a larger comprehensive high school or as small schools that may have only one academy theme.

Curriculum

Career academies are at the forefront of the college and career movement because they combine academic learning with a contemporary approach to Career and Technical Education. This results in young people who are prepared to enter college and succeed there, and who have the critical skills necessary to excel in the 21st Century workplace.

The National Academy Foundation has developed curriculum for its themes that is driven by proven, research-based methods that emphasizes literacy and project-based learning. In this highly-effective teaching approach, students are called upon to use teamwork, creativity, decisionmaking, communication and other core skills to perform tasks and achieve outcomes, mimicking the world of work. Professional development, technical assistance, and ongoing evaluation are offered by the National Academy Foundation to help teachers and academies succeed.

At the National Academy Foundation High School we strive to create a living classroom for each Academy, and we take the opportunity to create relevance to the extreme. We have a branch of the MECU credit union in our school that is operated by our Finance students. Our Hospitality & Tourism students cater and run all of our special events and are hired to do so for many local government and business events. Our latest project is to create an entirely student-run cafeteria. Our Hospitality students can create better tasting food than available at any other cafeteria, our Finance students can handle the money and business side, and our IT and Engineering students can create systems and processes to track the inventory. These aren't projects for projects' sake. They are real life applications for students' knowledge and skills that also allow them to create benefits for their own school.

Work-based Learning and Internships

Career academies integrate a range of work-based learning experiences that include mentoring from business professionals, career fairs, job shadowing, classroom speakers and culminate in an internship.

High school internships, particularly those that are paid, are an essential component of workforce preparation and an important motivator and context setter for young people. Internships introduce youth to the habits and value of work, while making connections between academic learning, the real-world application of knowledge, and the role of business in the community. Indeed, these partnerships between academies and the local business community are the cornerstone of the career academy model, connecting youth with hands-on experiences under the guidance of practiced professionals.

At the National Academy Foundation High School, we are able to provide a wide-range of opportunities for students to get a window into the world of work and apply the knowledge they have gained from their living classrooms. After students participate in job shadowing or internships, they are filled with the most incredible sense of pride and confidence. Once young people have had these experiences, there is a perceptible shift in the way they carry themselves. This even transfers over to the expectations that they have of their fellow students' behavior, all of which changes a school's culture indelibly.

Advisory Boards

One of the most distinctive elements of National Academy Foundation academies is their relationship with their local communities. Teachers and academy directors rely on Advisory Boards, made up of local business, higher education, and community leaders. Employees of more than 2,500 companies serve as Advisory Board members for National Academy Foundation academies. They create access to expertise in the subject areas the academies are built upon, and connect students and their growing skills to a wide world of career paths. These highly-engaged Board members provide students with paid internships and opportunities for job shadowing and mentoring; act as role models; and help to enhance career-themed curriculum through their own knowledge of the industry. Their constant involvement provides a stable base of support that allows academies to endure and flourish even when leadership at the school- or district-level changes.

At the National Academy Foundation High School, we have the most incredible collection of professionals who are an integral part of our school. They help us to make the subject matter real, and they hold us accountable. We only have 15–20 board members, but each one of them comes with a network that grows our reach exponentially. We have over 750 business people at our annual awards benefit who are deeply connected to our school.

Through this group come the most amazing opportunities. For example, when Hilton Hotels earned a contract to take over the hotel at the Baltimore Convention Center, connections made through our board made it so they created a \$3 million fund for college scholarships for Baltimore high school students who pursue hotel management and hospitality careers, with National Academy Foundation students receiving first priority.

CAREER ACADEMY EVIDENCE

Thanks to their longevity and the outcomes demonstrated at individual schools, career academies are one of the most well-researched high school interventions. Attached to my written testimony is a summary of the research, *Career Academies: A Proven Strategy to Prepare High School Students for College and Careers*,¹ compiled and recently updated by David Stern, Charles Dayton, and Marilyn Raby, and a recent paper commissioned by the National Career Academy Coalition and written by Betsy Brand of the American Youth Policy Forum, *High School Career Academies: A Forty-Year Proven Model for Improving College and Career Readiness*.²

Most significant among this research is a 12-year longitudinal, random-assignment study conducted by MDRC and released in June 2008. The full report is also attached to my written testimony.³

Key findings of the MDRC study include:

- Career academy graduates earned 11 percent more in total earnings over the 8 years following high school than their non-academy peers.
- Young men from career academies experienced increased earnings over 8 years totaling 17 percent more than their non-academy peers.
- An increased percentage of career academy graduates live independently with their children and spouse or partner. Young men, specifically, reported positive effects on marriage and parenting.
- While there were neither positive nor negative impacts on high school graduation rates or post-secondary attainment, for the subset of students most at risk of dropping out, career academy participants showed increased school retention through the 12th grade, improved attendance, and earned more credits.

Especially noteworthy are the magnitude and persistence of this earning effect over 8 years; it is roughly the equivalent earning power of an associate's degree.

The Coalition for Evidence-Based Policy, an independent, nonpartisan organization, has identified career academies as meeting a “top tier” evidence standard of effectiveness, based on MDRC’s long-term evaluation. The career academies model joins only three other interventions that the Coalition has identified that meet the “top tier” criteria. MDRC is now conducting follow-up analyses to examine how the programs produced these effects and which features were likely to have contributed most to the impacts.

¹The article referred to may be found at http://casn.berkeley.edu/resource-files/ProvenStrategy_2-25-1010-03-12-04-27-01.pdf.

²The article referred to may be found at <http://www.aypf.org/documents/092409CareerAcademiesPolicyPaper.pdf>.

³The article referred to may be found at <http://www.mdr.org/publications/482/full.pdf>.

NATIONAL ACADEMY FOUNDATION HIGH SCHOOL OUTCOMES

Students at the National Academy Foundation High School experience unprecedented success. We are currently ranked as the sixth best high school in Baltimore and admission is open to all students. For the past 4 years, we have achieved a 100 percent graduation rate and 100 percent of our students have been admitted to college. For the past 3 years, our attendance rate has averaged over 90 percent.

Our high academic standards have also led to impressive gains in our State achievement tests and we have closed the “achievement gap” among our increasingly diverse student body. Last year our twelfth graders scored almost twenty percentage points higher than the city average on both the English and Algebra 2 assessments.

All of this has brought us to the attention of many of the city’s outstanding students. As attractive as the school is, our superintendent and our school leadership are determined to ensure that it remains an option for those who could benefit most. Next year, we become a 6–12 school, absorbing a failing middle school and its struggling student body. It will be a challenge, but I am confident that with the career academy model, 4-plus years from now, those students will be on their way to post-secondary and career success with the unmistakable professionalism that marks a National Academy Foundation High School graduate.

OPPORTUNITIES IN THE REAUTHORIZATION OF ESEA

The reauthorization of the Elementary and Secondary Education Act provides many opportunities to increase the prevalence of the career academy model and apply to key lessons learned over the 40-year refinement of the model to improve the high school experience for all American young people.

Funding for Career Academies

While career academies are a widely used high school reform strategy, they are estimated to reach only 5 percent of public high school students. Increased funding is critical to increasing their scale and can also help to ensure quality among all the schools that seek to use the model. Since the National Standards of Practice were created in 2004, both the National Career Academy Coalition and the National Academy Foundation have developed detailed academy assessments to increase effective implementation in order to reap the most benefits for students, schools and communities.

Integrated Curriculum, Assessments and Credentials

The skills and knowledge that prepare students to be successful college applicants and goers are many of the same ones that lead to success in the workplace. We need standards that allow academic and career-themed courses to be integrated to expand the relevance of coursework and at the same time deepen students understanding and ability to apply core concepts. Alongside promoting these instructional methods must be assessments that measure students’ skills in addition to the knowledge they have gained. These assessments must also be aligned with credentialing opportunities in which students can earn industry certifications or college credits.

The National Academy Foundation is working to develop a certification and assessment system for its academy students. This system will center around a combination of course tests, a student portfolio demonstrating proficiency in industry authentic projects, and an evaluation of the internship, that will provide a portable credential that will assist students in their applications to college. This certification and assessment system will also enable the National Academy Foundation to gauge student learning and will form the basis for articulation agreements with prestigious universities to engender student access and portability to high quality post-secondary opportunities.

Thank you for the opportunity to provide this testimony. I am happy to answer any questions you may have.

The CHAIRMAN. Thank you.

And now our last witness is Mr. Habit.

**STATEMENT OF TONY HABIT, Ed.D., PRESIDENT, NORTH
CAROLINA NEW SCHOOLS PROJECT, RALEIGH, NC**

Mr. HABIT. Mr. Chairman and members of the committee, thank you so much for the opportunity to be with you today, and to speak

briefly. It is an honor to be here as we talk about this very important issue for our Nation.

I would, as a point of privilege, if you don't mind, say a special word about the practitioners who are at this panel today. It is very, very impressive to hear them talk. These are people who are on the ground, day to day, working with young people and teachers, and they deserve a great deal of respect from all of us.

So, thank you for that, it is an honor to be with you.

I want to thank Senators Burr and Hagan for their very generous comments in opening today. They are remarkable leaders for our State, and we are very, very grateful for the things that they do here on behalf of North Carolina.

In North Carolina, we are so fortunate, in that we have had a succession of leaders who are deeply committed to this idea that education must change, and must change rapidly, in response to an economy that is changing at a breathtaking pace. Our Governor, Beverly Perdue, has launched a new education agenda called Career and College—Ready, Set, Go! That agenda, for the first time in our State's history, sets out the expectation that every child should graduate and—every child should graduate ready for the next step, which assumes continued education beyond high school. She has taken these steps and, with her budget, made recommendations to build on the innovation work in North Carolina during times that are very, very tight for our State, as they are for most States.

Our general assembly shares this commitment; they have created a commission called the JOBS Commission. That commission, in effect, looks at, How do we join our businesses, schools, and jobs, to connect secondary school innovation to economic and workforce development in ways that will accelerate the change process that I am going to talk about briefly today? That commission is led by our State's Lieutenant Governor, Walter Dalton.

By so many measures, we have been very fortunate, as a State, to have great progress, in that there are indicators that suggest that the work is putting us where we really need to be. For example, last year, North Carolina ranked No. 1 in the percentage of students enrolled in advanced mathematics in high school, at 80 percent. But, the economic restructuring has created a sense of urgency around the transformation of secondary education that has really made our work possible at the North Carolina New Schools Project.

We recently commissioned a poll of young people who have graduated, to ask them about their perceptions of what they received and did not receive in secondary schools. What they came back to us with was very clear messages that they felt there were significant gaps in their preparation, both for high school and for life beyond high school. As we look at our State's graduation rate, only 72 percent of our students graduate in a 4-year period in North Carolina; and for African-American students, that number is around 63 percent.

As has been said earlier, our organization was created to serve in the nexus between the public sector in government and private sector to help accelerate the change process in ways that will both

be sustainable for the long-term and that will, ultimately, systemically impact every community and every school in North Carolina.

So, I want to briefly update you on our progress, point to a few data points, and then talk briefly about where we are headed, as an organization and as a State.

To date, we have created 106 innovative new secondary schools around North Carolina that range from early-colleges. Early-colleges, as you have heard earlier from our partner, Cassius, with the Jobs for the Future, are typically based on the campus of a 2- or 4-year college or university, in which students, beginning in the 9th grade, are accelerated toward a 12th or 13th year, and expected to graduate high school with up to 2 years of college credit, at no cost to them or to their families. Students who enroll in early-colleges are typically underserved, and these are the students who would not likely complete high school, and are typically the first in their families to succeed in college.

We are also involved in the development of innovative schools on traditional campuses that are focused in ways that are inconsistent with conventional high schools; where teachers, working in teams around a group of students, have the ability, and the support, to meet the individual needs of each student.

I believe that the evidence of these schools provides us with some data that gives us—I'm looking at the time, here, and realizing I'm going to have to significantly change my remarks.

Let me just add a few points here, and I'll conclude.

With the early-colleges, we find that the students—by the end of the 9th grade, there essentially is no achievement gap—no achievement gap between the minority students and the majority students, compared to conventional schools, where the gap in achievement is 10 points or greater. We are seeing that students in our innovative, redesigned schools are graduating at much greater rates than students in conventional high schools that are compared to them, across the board.

I am going to mention a couple of lessons along the way, and skip the concluding comments that I have here.

First is that changing beliefs in schools is critically important, as you have heard from others who have spoken today. That is, the traditional set of low expectations for many students really is a cancer that undermines the attempt to set very high and ambitious goals for student performance.

Second, setting a goal that every child should be expected and supported to attend college provides a way to unify the thinking of teachers, it gives them a platform with which to ask meaningful questions and to connect with one another, and ultimately focus on the resources and time of that school.

Third, meaningful change in schools is often undermined by the fact that schools lack the capacity. They lack the training, the tools, and experience around change management. Many of our private-sector partners have, for years, been working around change management, and going out and purchasing expertise in change management. We need to expect schools to have the same supports and structures if they are to be successful at creating the new American high school.

And last, the idea that we heard earlier, that rethinking leadership is critical. Principals in new schools must be leaders of teachers, and teachers of teachers, as we heard earlier, rather than managers of facilities who focus on data and stability of campuses.

With that said, let me conclude my comments and hope that there are some comments or questions from you all.

[The prepared statement of Mr. Habit follows:]

PREPARED STATEMENT OF TONY HABIT, ED.D.

Mr. Chairman, Ranking Member Enzi and members of the committee, thank you for the invitation to testify today. I am pleased to be with you to consider the urgency for change in our Nation's secondary schools. My name is Tony Habit, and I am president of the North Carolina New Schools Project.

In North Carolina we are fortunate to have leaders who appreciate both the urgency for change and the magnitude of the change that must occur. Our governor, Beverly Perdue, continues to champion innovation in our State's secondary schools with an education agenda that sets a paramount goal of raising the State's graduation rate and ensuring that graduates are well prepared for college, career and citizenship. Even as North Carolina faces another year of serious fiscal challenge, Governor Perdue's proposed budget calls for continued investments to improve educational outcomes as an essential strategy to advance the State's future workforce.

The North Carolina General Assembly shares this commitment by enacting legislation in 2009 to establish the JOBS Commission—Joining Our Businesses and Schools—that is co-chaired by Lt. Governor Walter Dalton and Representative Rick Glazier. The Commission is tasked with recommending the next phase of secondary school innovation with a particular emphasis on economic development.

North Carolina also has benefited from the unparalleled philanthropic leadership of the Bill & Melinda Gates Foundation to transform the Nation's high schools to meet the demands of this century.

By many traditional measures, North Carolina is fortunate to have high schools that in relative terms have succeeded over the last century in moving from institutions that served very few to ones that strive to serve all students. At 80 percent, North Carolina is ranked first in the country in the percentage of high school students taking advanced math courses.¹ North Carolina ranks in the top third of States for the percentage of high school seniors passing Advanced Placement exams.² Sixty-three percent of our State's 12th grade students took the SAT in 2009, and North Carolina had the second largest 10-year gain in SAT math scores among States with over 50 percent of the population taking the SAT.³

At the same time, North Carolina has felt acute pain from dramatic economic shifts of the past decade, and hastened by the downturn of our State and Nation during the last 2 years. In the first 5 years of the last decade, for example, North Carolina lost nearly one-quarter of its manufacturing jobs—184,200 jobs in all. The "Big Four" of our State's traditional manufacturing base—tobacco, textiles, apparel and furniture—are projected to continue shedding jobs.

As low-skill, high-wage jobs have vanished, some communities are left bereft of opportunity. Idled middle-aged workers often are trapped in a string of low-skilled, low-wage jobs or are required to return to college for retooling without the preparation in high school required to succeed.

There is strong evidence as well that our most recent high school graduates are under-prepared for the demands they are facing in the "real world." In a poll commissioned by our organization a few years ago, half of North Carolina high school graduates in college reported gaps in their preparation for college academic work and half of recent graduates in the workforce report gaps in their preparation to get a good job. A quarter of the recent graduates in college reported having taken a remedial course.

In addition, far too many high school students never reach graduation. North Carolina's cohort graduation rate in 2009 was 72 percent of the students who entered 9th grade in 2005. For African-American students, the graduation rate was

¹National Center for Public Policy and Higher Education (2008). *Measuring Up 2008*. Available at <http://measuringup.highereducation.org/default.cfm>.

²College Board (2010), AP Report to the Nation 2010, Available at http://www.collegeboard.com/html/aprtn/pdf/ap_report_to_the_nation.pdf.

³Public Schools of North Carolina (2005). *The North Carolina 2005 SAT Report*. http://www.ncpublicschools.org/docs/accountability/reporting/sat/2005/sat_report_2005_part1.pdf.

only 63 percent. For Hispanics, it was only 59 percent. And for students from low-income families, it was 62 percent.

My organization, the North Carolina New Schools Project, is an independent, not-for-profit corporation that serves as the nexus of the leadership of Governor Perdue and our State Board of Education; the strong interest in change among the Gates Foundation and other philanthropies, public and private colleges and universities and the private sector; and the pressing economic need that North Carolina faces.

While impressive in relative terms, the incremental gains of our high schools are insufficient both in terms of scope and in terms of pace to address a changing economy. North Carolina must graduate *more* students with *more* skills and knowledge than ever before. The New Schools Project was established to accelerate the pace of innovation in our State and to ensure that all students have access to high-quality schools that will prepare them fully for college, work and life.

Since I last appeared before this panel, in the spring of 2007, the number of innovative high schools that we support has more than doubled—to 106 schools across the State. The number of students has tripled from about 7,000 in 2006–2007 to more than 21,000 this year. Two-thirds of the schools are early colleges that are proving to be highly successful in keeping students in school, challenging them with high expectations and effective support and graduating them well-prepared for college and career. The other 36 schools are yielding invaluable lessons about the challenges inherent in redesigning existing, traditional high schools into ones that truly serve all students.

I believe that the results being achieved by North Carolina's innovative schools are persuasive evidence that secondary schools can be transformed into places of powerful teaching and learning where truly all students graduate ready for college and careers.

For example, a recent independent study of early college in North Carolina found that these schools are succeeding in erasing the achievement gap.

- By the end of 9th grade, little or no gap separated the performance of non-minority students from under-represented minorities in the core subjects of English I and Algebra I. Gaps of 10 points or more were measured for similar students attending traditional schools.

- Overall, the study's first-year analysis found that by the end of 9th grade, 83 percent of early college students had successfully completed Algebra I, compared to 67 percent of similar students attending other schools.

On a number of other measures as well, North Carolina's innovative high schools are improving outcomes for students. Consider these results from 2008–2009 for the 101 innovative high schools that the North Carolina New Schools Project (NCNSP) was helping to support:

- **North Carolina's innovative high schools are making academic progress.**

- Nearly 7 in 10 (67 percent) of 101 innovative high schools last year outperformed their comparison high school on the State's ABCs accountability measurement, based on statewide exams in core subjects.
- Passing rates for early college high schools on Algebra I end-of-course exams were nearly 10 points higher than the State average and more than 15 points higher on English I exams.
- Early college students earned higher grades, on average, than college-age students last year in their community college courses. Of all the college courses taken by early college students, 75 percent received a grade of C or higher, compared to 70 percent of courses taken by other college students.

- **Students in North Carolina's innovative high schools are graduating.**

- Nearly three quarters of the redesign high schools with senior classes in 2008–2009 (17 of 23 schools) achieved graduation rates outpacing those of comparison schools in their districts with similar student demographics.
- Seventeen of the schools also had graduation rates above 80 percent, with eight of the 17 with rates of at least 85 percent, compared to North Carolina's overall graduation rate of 72 percent for the class of 2009.

- **North Carolina's innovative high schools are challenging students.**

- Of 59 high schools in North Carolina where at least 25 percent of students took Algebra II in 2008–2009, 41 were innovative schools supported by NCNSP.

- **Students in North Carolina's innovative high schools are less likely to drop out.**

- The combined dropout rate in 2008–2009 for 97 NCNSP schools open this year and last was 2.96 percent, compared to 4.27 percent for all high schools in the State.
- In 9th grade, the most critical year and where students are at greatest risk of quitting school, NCNSP schools had a combined dropout rate of 3.1 percent, compared to 5.7 percent for all North Carolina high schools.
- 42 of 97 NCNSP schools lost no students as dropouts in 2008–2009.
- **Attendance is better in North Carolina's innovative high schools.**
 - The combined attendance rate for 101 NCNSP schools in 2008–2009 was 95 percent, vs. 93.5 percent among comparison of high schools.
 - Nearly four of every five innovative high schools in 2008–2009 had better attendance than a comparable, traditional high school.

LESSONS LEARNED ON THE ROAD TO MEANINGFUL CHANGE

Since 2003, the North Carolina New Schools Project has partnered with local school districts and, in some cases, with national partners such as the Asia Society, the New Technology Network, and the KnowledgeWorks Foundation to open innovative schools of various designs. We engage with a school and its school district for at least 6 years—a planning year followed by 5 years of implementation. This time-frame recognizes both the scope of the change we are pursuing and its complexity. This day-to-day, on-the-ground experience in working to foster innovation—along with what we have gleaned from the experience of others in the field—has offered us important insights into what it takes to transform secondary school to make it more effective for more students. Let me offer you four specific observations to consider.

Changing Beliefs

Simply put, low expectations are a cancer that can weaken a school enough to make significant changes in teaching impossible. It is clear how this occurs in a typical high school—some students are tracked into demanding courses which prepare them for a future beyond high school, while others are tracked into classes that offer little challenge and even less future. The usual justification is that “those” students were not “ready” for Algebra II or honors English. Some parents reinforce these beliefs by advocating that certain students be discouraged from enrolling in advanced courses.

If I do not believe that all students can do the work, I do not feel obligated to assume responsibility for changing the way my school is organized or the way resources are allocated to ensure that all students succeed. In the schools we partner with, we work to instill the notion that preparation to tackle new demanding content is the responsibility of the teachers, not the students.

In our partnership with schools, we insist that they be fully representative of the student population of their district; we do not allow access to innovation to be limited to the best and brightest. This is one of our stakes in the ground to enforce what we believe as an organization about who can do the work. Notably, three of every four of our partner schools subject to No Child Left Behind's growth provision last year made Adequate Yearly Progress. Among the 60 early colleges open last year, only two fell short of that goal.

Teachers and administrators frequently do not believe all students—particularly poor and minority students—can master the knowledge and skills that lead to true opportunity until they see it first hand. As part of our work, we have taken hundreds of educators from across North Carolina on study visits to schools in other parts of the country whose results are irrefutable. Educators study some of the country's most successful high schools to learn how changed instruction and high levels of student support combine to improve student outcomes. This includes direct classroom observation that leads to deeper reflection about changing instruction. More than 20 schools such as University Park Campus High School in Worcester, MA, and Urban Academy at the Julia Richmond Complex in New York City are used for these site visits. In partnership with the University of North Carolina system we are now developing four of our own innovative schools into “learning labs” to make these kinds of transformative site visits even more accessible.

While it seems counter-intuitive, there is strong evidence supporting the premise that with greater challenge, students try harder and perform better. This is particularly the case when schools and students focus on the most important content and skills and when the material relates to students' own aspirations. The term “comprehensive high school” speaks to the difficulty of achieving this kind of focus in the traditional setting. We work to create high schools of no more than 400 students that provide focus either through an academic theme, an instructional approach, or

their location on a college campus in the case of our early college high schools. Additionally, a school's focus represents one strategy to enable teachers in the core courses to work together to make connections between courses and the world of work. The intent of a focus is not preparation for a specific career, but rather preparation for a lifetime of learning and workplace changes.

As adults, we should not shy away of expecting more from all students. In our survey of recent graduates, 77 percent said that high school graduation requirements were easy to meet, 80 percent said that they would have worked harder had the expectations been higher and 68 percent said that they would have worked harder in high school had they known then what they know now about real world demands. As adults, we must bear the burden of our knowledge of what preparation for college, work and life requires and must act on that knowledge.

Setting College as the Goal

Often, the limitations of beliefs about students' capabilities emerge around the notion of making every graduate "college-ready." Inevitably, someone raises the challenge that not every graduate will go to college.

The overarching goal of North Carolina's innovative high schools is to ensure that every student graduates college-ready. We are even more explicit in asking, first, that students meet the admission requirements of the University of North Carolina system and, second, that every student earn college credit before leaving high school.

This college-ready imperative is intentionally provocative. It becomes a point on which a faculty must agree and collaborate. Another value to the small scale of our innovative high schools is that they allow teachers to be flexible in meeting the academic needs of students, to alter what is offered and for how long in ways that a 2,000-student high school cannot.

At the same time, this imperative is based on a growing body of research that shows that the skills high school graduates need in order to be ready for college and ready for the 21st century workplace are the same.⁴

The most recent such study, conducted by ACT, analyzed data and items from its college and work readiness tests, found that 90 percent of jobs that do not require a bachelor's degree but that do provide a "self-sufficient" wage require the same level of mathematical and analytical reading and writing skills as those needed by students who are planning to enroll in a 4-year university.⁵ The report goes on to state that this finding suggests that "all high school students should be educated according to a common academic expectation that prepares them for both post-secondary education and the workforce. This means that all students should be ready and have the opportunity to take a rigorous core preparatory program in high school, one that is designed to promote readiness for both college and workforce training programs."⁶ However, another ACT study released this month showed that high school teachers' view of college-ready content misses the mark in terms of focus.

Voters in North Carolina, perhaps intuitively, understand this convergence. In a poll we commissioned, 70 percent agreed that the skills to succeed at work and in college were the same. Eighty-four percent said it was important for nearly all high school graduates to move on to a 2- or 4-year college, with 69 percent calling it very important.

We have good reason to believe that students can meet this higher expectation. Last year, students in North Carolina's early college high schools on average took at least three college courses.

Managing for Significant Change

Meaningful change in high schools is essential *and* elusive; it is worth remembering that *A Nation at Risk* was a report about changing secondary education. Schools and school districts are rewarded for maintaining the status quo and for adding new programs. For example, rather than consider the absence of personalization and effective student supports within a school, districts will add a dropout prevention program or a specialist for that problem. At its heart, however, changing schools to graduate all students to be college-ready means redirecting all of the resources of a school to provide greater student support and to address highly focused

⁴ See ACT, *Ready for College and Ready for Work: Same or Different?*, 2006 and Achieve, *Ready or Not: Creating a High School Diploma That Counts*, 2004.

⁵ Examples of jobs cited in the report that do not require a bachelor's degree but do provide a "self-sufficient" wage include electricians, construction workers, upholsterers and plumbers. From ACT, *Ready for College and Ready for Work: Same or Different?*, 2006.

⁶ ACT, 2006, page 2.

targets for achievement. This is especially true in using the resources represented by the role and responsibilities of adults in the school.

While the private sector has experienced decades of organizational restructuring in which workers are displaced in one function and then rehired in another to adapt to changing market conditions, the education sector possesses no such history. Changing the roles of adults in schools typically results in conflict and undermines the overarching school change process—if not derailing it altogether. Most schools and districts lack the expertise or organizational structure with which to manage change and innovation.

Further, since communities and educators must embrace the need for change, the absence of resources and expertise for most schools and districts to effectively engage their communities means that well-intentioned efforts can be undermined by relatively few, well-organized citizens or disgruntled educators.

Current funding and professional development programs reinforce a piecemeal approach to change and typically fail to support a coherent, sustained and focused model for schools. It stands to reason that if tools and plans for school change are not supported by high-quality and aligned training that the likelihood of success will be greatly diminished.

The New Schools Project and its partners provide specific supports for new and redesigned high schools that deviate from this norm. They include:

Teaching for Results: This annual series of intensive professional development sessions for teachers supports the use of protocols and other tools to sustain the focus on instruction, academic rigor and professional learning communities. The sessions stress differentiating instruction, teaching literacy across the curriculum, facilitating meaningful learning, and providing effective student support.

Leadership Institute for High School Redesign: In cooperation with the University of North Carolina Center for School Leadership Development and the Principals' Executive Program, the Leadership Institute for High School Redesign offers a peer support and professional development network for principals in new and redesigned high schools. The network promotes effective instructional leadership.

Coaching: Each new school also benefits from coaching services in which experienced educational leaders and master teachers assist with facilitating the overall change process and with the development of instructional strategies such as differentiation of teaching to meet individual needs of students; lessons and units which engage students in learning; and the improvement of literacy and mathematics skills.

Investing financial resources and expertise in building the capacity of schools and districts to manage change is essential. Schools and districts must be expected to define a single, comprehensive model for change regardless of what that model might be and sustain the work over time.

Further, within the broader model for change, strategies for professional development of teachers and school administrators and district office personnel must be tightly aligned and integrated so that they connected at all levels to point in the same direction. In our work this year to help schools define rigor, the sessions involved both principals and teachers; in essence, they debated within their school the definition after visiting other schools in North Carolina thought to offer rigorous instruction. Expectations of teachers and principals must be aligned with those of district administrators for high school innovation to be sustained.

Rethinking Leadership

Finally, a new generation of student-focused schools calls for a new model for school leadership. The principal in a traditional high school is a building manager first and an educator second. Schools which place teaching and learning above all else are led by principals who understand both school design and who facilitate among teachers an unrelenting focus on high quality teaching and learning.

One element of our partnerships aimed at ensuring the sustainability of innovation is our expectation that our partner schools are completely autonomous, with its own principal and school budget, an essential step to create more entrepreneurial faculties with both the responsibility and accountability for the success of all students. This increases the demand for capable leaders.

New, proactive initiatives to identify, recruit, place and support principals to lead schools are required. Leadership preparation programs should emphasize both school designs that support achievement and the role of principals as facilitators of adult learning in schools intended to strengthen teaching.

Since most district administrative staff begin as principals, creating a new generation of school leaders who believe and act as though all students can succeed will inevitably change districts over time.

STRATEGIES GOING FORWARD: ALIGNING INNOVATION WITH ECONOMIC DEVELOPMENT

Our pressing priority is scaling the success of innovation across districts and regions. One key strategy is to link innovation with economic and workforce development.

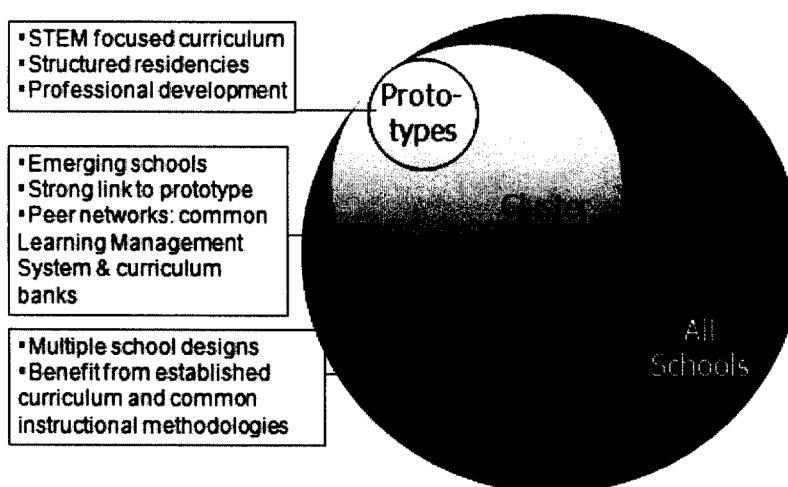
In cooperation with government, the private sector, higher education and others, we are developing ways to connect new schools to promising growth sectors of the economy with high-wage, high skill jobs. This emphasis includes the development of *networks* of STEM—science, technology, engineering and mathematics—focused secondary schools, the incorporation of one-to-one computing and rethinking the role of career and technical education in a way that helps all students become both college- and career-ready.

We think that achieving cost-effective, scalable solutions in secondary school innovation demands greater collaboration among schools that share a similar focus. New Schools is creating groups of schools with shared themes keyed to North Carolina's economy such as biotechnology, health and life sciences, aerospace and energy. Each of these schools will incorporate engineering and technology to achieve mastery of science, mathematics and the skills essential in the innovation economy.

For example, Duke Medical Center will soon host a secondary school focused on health and life sciences and that also incorporates engineering. An agricultural research center in a poor, rural region of the State will soon host a new school focused on biotechnology and agribusiness. North Carolina State University will soon host an early college themed around engineering and sustainable energy. In each of these examples, the schools will be part of a network of similarly themed schools, and each will have strong ties to the private sector in the development of academic content.

These clusters of STEM schools will also incorporate one-to-one computing. With the assistance of corporate partners like SAS and AT&T and private charities such as the Golden LEAF Foundation, New Schools is creating models in which each student has a laptop, netbook or some other digital device that in some instances have already replaced textbooks. These schools will leverage technology to transform teaching and learning; demonstrate instructional strategies and data analysis that use technology to engage students in interactive learning; and inform the anticipated statewide expansion of one-to-one computing in the near future.

STEM School Theory of Change



Finally, the historical division between courses of study focused on college preparedness and those intended to graduate students prepared for work have frustrated attempts to ensure true readiness for life behind high school.

The New Schools is working in cooperation with our State Superintendent of Public Instruction to advance a blended approach integrating core academic courses and career and technical courses. Unlike traditional secondary schools, these schools will blend course content into new structures for earning high school credit, making the transition from discrete blocks of knowledge toward an integrated and applied approach to learning. Students enrolled in a STEM-themed school, for example, might learn Algebra I and introductions to biotechnology and physical science in the same course. Other approaches might pair an online high school or college course with a different, but related high school course or seminar, making connections across disciplines. Students will have the opportunity to pursue individual paths through internships, mentoring, field experiences and individually designed projects.

This integrated approach to learning will accomplish the dual goals of: (1) engaging students to master more demanding content by illustrating the application of academic content to real-world problems and needs; and (2) mimicking the world of adult learning in which solving complex problems requires applications of information ranging from literature to mathematics, science and technology.

In conclusion, the North Carolina New Schools Project believes that a clear and unwavering focus on the bottom-line goal of graduating all students ready for college, career and life in the 21st century drives real change in the classroom. In that same spirit, we believe that the Elementary and Secondary Education Act must be aligned to support that same goal.

The CHAIRMAN. Thank you very much, Mr. Habit.

Thank you all for very succinct, but very pointed, remarks. As I said, your statements will be made part of the record in their entirety.

I will now recognize Senators for 5-minute rounds of questions. As you know, we sent a notice out—and I shared this with Senator Enzi. We agreed on a new structure so that people will be recognized in the order of their appearance, regardless of party, on this committee. So, the order that my staff has, of appearance, is Franken, Hagan, Burr, Bingaman, Roberts, Murray, Murkowski, Bennet, Merkley, Reed, Casey, and Sanders. The only one that's out of order there is Murkowski, because she is standing in for the Ranking Member. I will recognize her after my opening questions.

Let me just pose a general question to all of you—graduation rates. You have all talked about improving graduation rates, getting kids ready for college. We heard, the other day—maybe last week, from other witnesses—about the problem with dropouts. You get kids that are behind, they are in high school, they have some problems, they drop out, they come back, they are behind—if you can get them back in. That is one part of my question, What do we do with dropouts? How do we get them back? But, the idea that somehow they have to graduate with their peers in 4 years, and if—are we going to set up, or should we set up, some kind of performance criteria for high schools, secondary schools, in terms of graduation rate in 4 years? Is that all that important? Or is it just important to get these kids through? Some kids may take 5 years, or 4½ years. So, if we are saying, “Well, if there is some performance criteria on 4 years, do schools then start thinking about, ‘What do we cut?’ ‘How do we slice and dice this?’ ‘How do we shove these kids through in 4 years?’ Because we will get evaluated on that.” Is there another set of performance evaluations that we ought to be thinking about, which is not strictly a 4-year—but in terms of how many kids graduate, and how ready they are either for career or college? So, if you could address yourself to that.

Mr. Johnson, we will start with you.

Mr. JOHNSON. Yes, thank you for that question. We know, in these low-performing schools, there are, given our research, up-

wards to 80 percent that are actually off track. So, they're going to need some type of educational setting that has the curriculum, the supports needed to get them back on track to graduation. When it comes to graduation-rate accountability, I think our position at JFF has been that—aligned with many of the Governors, who have agreed to grad-rate accountability definition—and we see, in regulation now, a great deal of activities now by States to put in place 4-year graduation-rate definitions and measures of progress. When you move beyond that and look at these programs that get these off-track students where they need to be, the accountability needs to be fair for them in allowing for the use of an extended rate, as the regulations provide. And that, "as long as they get them across the line," is the problem.

The criteria for the type of educational options that qualify for the use of extended rate needs to be extremely tight, because the last thing we want to do is to create an incentive for pushout among districts.

The CHAIRMAN. That is what I am concerned about.

Anybody else want to address themselves to that? If someone drops out, how do you get them back? And should there be some kind of incentive, initiative. Mr. Capozzi, you talked about initiatives—

Mr. CAPOZZI. Thank you.

The CHAIRMAN [continuing]. To get these kids back in.

Mr. CAPOZZI. Senator Harkin asked, "How do we get them back." First, we should not let them drop out. That is first and foremost. What we do at Elmont Memorial High School—and it is becoming harder and harder, especially with our State aid being cut—we had summer school. I will give you a perfect example. We are on the westernmost portion of Nassau County, so we are right on the Queens city border. Students, every year, every month, come to our school below grade level. We had summer school and we had night school; therefore, we could catch kids up with quality education, as well, not just push them through.

What we do, we use an acronym called ACTION.

The CHAIRMAN. I read that in your statement.

Mr. CAPOZZI. Right. It's something that's real, and it's something that works. A big part of it is our pupil-personnel counselors. The average class size in our school is about 325, 330, we don't let a student fall through the crack. We establish a culture, in the school, that every student is a success story. It's not easy, it's hard work. But, as far as the graduation rates go, it's the way we report it. I could have someone in my cohort for a couple of months, they'd move, he or she is still in my cohort. And it's reported like that.

I would not like to see 5-year graduation rates. I believe that students can complete a quality education in 4 years.

The CHAIRMAN. Anybody else want to address this? I might gently disagree with you on that.

Mr. CAPOZZI. That's OK.

The CHAIRMAN. Because some students have tough home lives.

Mr. CAPOZZI. Absolutely.

The CHAIRMAN. They get off track. They may get into drugs, they may even be incarcerated for a while, in a juvenile home or something—and then they come back.

Mr. CAPOZZI. The school has taken on—I'm sorry.

The CHAIRMAN. Pardon?

Mr. CAPOZZI. I'm sorry, I didn't mean to interrupt.

The CHAIRMAN. Oh, no, I was just saying that sometimes, you know, to try to get these students to graduate in 4 years becomes overwhelming.

Mr. CAPOZZI. It does. It's not easy, but that's what we're paid to do. That's what teachers are paid to do, to help students graduate. You know, what schools—

The CHAIRMAN. But, again, I challenge you, Mr. Capozzi—is it more important to get that kid to graduate and to actually absorb learning, or to say, "You've got to graduate in 4 years or you're out of here?"

Mr. CAPOZZI. I don't think you say, "You're out of here." But I, and I disagree, respectfully, that we don't just push kids through. Summer school is not some "flunky dropout building" where you put the failures in. Stuff happens. Kids have a whole—I received a phone call today, "How is that child going to graduate with something so traumatic her life?" It's something that we do—schools become more than an educational institution. They really are. And we look at that, and we know that, and we realize that, and we perform upon it. Kids with hard home lives—that's a fact of life, but, you know what, we can't give into it.

The CHAIRMAN. Mr. Capozzi, my time has run out. If I get another round, I'll come back to that question.

Senator Murkowski.

SENATOR MURKOWSKI

Senator MURKOWSKI. Thank you, Mr. Chairman.

You've mentioned, Mr. Capozzi, that the real ticket here is to keep kids from dropping out in the first place. I certainly appreciate it, although I think the Chairman has raised some real issues that we struggle with.

I want to go back to some of the comments that you made, Mr. Deshler—and, Mr. Harrison, you spoke about within your school—and that's focusing on this "missing middle," you call it. It seems like we get so caught up in working with the kids once they hit high school, and say "OK, we've got to figure out ways to keep you in." But, our reality is, kids start checking out a heck of a lot earlier than high school, and our focus, earlier on, whether it's the literacy aspect or challenging them through STEM programs, getting them into a college—having a sixth-grader go to a college, I think, is a great way to get them thinking about what they need to be doing.

Are we, from a funding perspective, then—as we think about how we allow for the programs that deal with literacy, how we challenge our kids in the different areas—are we missing the boat by not starting earlier, as we focus on these kids? I don't mean to limit it to just Mr. Deshler and Mr. Harrison, but I worry about the kids that are in the middle school, where we just kind of figure, "OK, you made it through elementary, you're cruising now."

Mr. DESHLER. Right. Excellent question. For years we have, policywise and within the educational community, had this conversation about, "Where do we do the investment?" And, as I said

in my statement, no one can argue against looking at younger children and doing the very best that we can, and what we know, with younger students.

The problem is, the curriculum changes as students move along. We may have a student well prepared in the early elementary years, doing fine, but as he moves past fourth grade, fifth grade, the demands of the curriculum change, but we no longer are teaching them literacy skills, and many of the students start to fall behind, get discouraged, start to disengage, and then it becomes a vicious cycle.

Senator MURKOWSKI. So, do we continue those literacy skills throughout high school?

Mr. DESHLER. Absolutely. But, they change. I think something that is exciting about the new core standards that are being discussed is the infusion of literacy instruction throughout middle school and high school, which is something that has not happened in the past. It's not just students who are struggling in learning, but students who are doing well. The demands to take in large amounts of content and to draw inferences and problem solve, and so forth—students need deliberate instruction in how to do that from a literacy prospective.

Senator MURKOWSKI. Let me go to Mr. Harrison.

I know you wanted to comment on this, but I also would like a little bit of discussion on—the terminology that you used, Mr. Habit, was “rethinking leadership.” I'm curious, as to some of the responses that you may have to the proposal that we need to remove the principals from the schools that are not succeeding. From a rural State, that's a real issue for us. So, I'd like to hear a little bit of your input on that, too.

Mr. Harrison, and then Mr. Habit, if you could address that.

Mr. HARRISON. Sure. I think it's really important to think about middle school as the time where kids either get on the bus or get off the bus. I think there are a couple things that a lot of urban charter schools have done around the focus of school culture and the teaching of values. I think we have to do a better job of teaching our most at-risk students the values that they need to have to be productive citizens here in our country. We also have to have a school culture that creates a mindset in kids that they want to stay and be a part of a school. I think that's really important.

I think when you talk about “rethinking leadership,” I always—I'm very concerned about our student achievement. But, more importantly, I'm concerned about the level of relationship-building that myself, teachers in our building, our staff—we need to connect better with our students and with our parents, and really making sure that they feel ownership of our school. I think there have been a lot of charter schools that have made a lot of progress in really making it feel like a team and a family.

I'd like to just point out a couple of things that I think support that. There was a question around retention and attrition issues that a lot of urban middle school and high schools are facing. I think that this is where we think about the use of data.

There are two data systems that DSST is known for. We track data around student achievement. I can look in a sixth-grade student's notebook and know exactly what standards he or she needs

to work on. So, I can talk to a student and know, "Hey, you know what, how's adding fractions with unlike denominators working for you?" That type of relationship-building is really important, but using data to make sure that there's a sense of urgency for that child to master fractions and decimals, that's really important in the sixth grade.

No. 2, we have an extensive data system that tracks school culture data. This is a little bit unique to DSST. I know exactly how many times a student hasn't done their homework, or how many times they've had a compliance violation, or the number of times they've been awarded for an "effort of the week" or a school performance award around a test when we have our interim assessments. I think that there are some systems that we should look at to share more often so that school leaders are empowered with the tools and around data to really creating culture and buy-in from all students.

Senator MURKOWSKI. My time's expired, Mr. Chairman, but hopefully there'll be an opportunity for someone to address that issue—the principals.

The CHAIRMAN. Senator Franken.

SENATOR FRANKEN

Senator FRANKEN. Thank you, Mr. Chairman.

Mr. Harrison, you talk a lot about charter schools, and your school obviously is doing an exceptional job. I read your whole testimony, and it's—congratulations on your remarkably successful school. But, unfortunately, charter schools do have a mixed record; in fact, a recent study by researchers at Stanford found that fewer than one-fifth of charter schools offered a better education than regular public schools. Almost half offered an equivalent education, and more than a third were, quote, "significantly worse."

We have these schools come before us that are incredibly successful, like yours—we had one, Green DOT, from LA.

Mr. HARRISON. Yes.

Senator FRANKEN. Then, you know, I asked about it, and it turned out that it had gotten funding from Bill and Melinda Gates, which I think is great. Bill and Melinda Gates are doing great stuff, and you can look at that school as a laboratory. That's an investment in laboratories. Did you get outside funding like that?

Mr. HARRISON. Yes, we did. Let me talk to you about DSST's model. We do use fundraising to support infrastructure-building, but our program is strictly on per-pupil. I think we need to—we can't rely on the kindness of others all the time. That's going to change from year to year. I don't think that—

Senator FRANKEN. Well, I guess what I'm trying to say is—we see a lot of successful stuff, a lot of successful stuff in these hearings. And our job on this committee is to scale that up.

For example, Mr. Deshler, you talked about this Dubuque, IA, program, in which they were reading from a program called Fusion Reading, and had remarkable results. And I was reading the thing. I said, "OK, let's just do that." You know? Why do we have to reinvent the wheel every time? We have all these things that are working, and we hear them all the time, and I'm trying to figure out how, as a Senator, where the disconnect is.

I like the Investing in Innovation Fund. I think that's a terrific tool to—basically, it's what the administration has done through the stimulus package, invested in finding things that work, and scaling them up.

Now, one of the things that you, Mr. Habit and Mr. Capozzi, talked about were principals, the importance of principals. Both of you spoke to the fact that principals used to be building managers, and now need to be leaders and teachers of teachers. I'd like you to speak to that, because Senator Hatch and I put a bill together, where we believe the exact same thing.

What does that entail? And are you substituting for education schools that aren't teaching the teachers? I know it's an ongoing process, and it has to be, but can you speak to that a little bit?

Either of you.

Mr. HABIT. With regard to—

Senator FRANKEN. Both.

Mr. HABIT [continuing]. Principalship?

Senator FRANKEN. Yes.

Mr. HABIT. Yes. Well, the approach that we take is that the principal needs direct support in making that transition from being a building manager, focused on safety and so forth, to focusing on teaching and learning. So, we assign coaches, who are master principals, to sit with that principal, to essentially do the same sort of demonstration and mirroring you expect with teachers in a classroom, to get classroom-level change. So, if the growth doesn't happen with that sort of support, then the principal needs to be outsourced and the recruitment needs to happen for a new principal.

The problem is, the ranks are thin. We need solid models for the identification and recruitment and support of topnotch—

Senator FRANKEN. Especially in rural schools—

Mr. HABIT. Yes.

Senator FRANKEN [continuing]. As Senator Murkowski points out.

Mr. HABIT. But, I would suggest, even in wealthier communities, the ranks are very, very thin. Because the job is quite challenging. That's why I made my opening comment about the folks on this panel. It is a very, very demanding job. Scaling success, whether it's a charter or an innovation in a conventional school, is going to come down to the ability of that person to lead that change.

Mr. CAPOZZI. When you talk about things that work, and you look at what needs to change, I really look at it as pretty simple. Student achievement is directly related to effective teachers. Effective teachers are directly related to effective principals.

Being a teacher of teachers, I came from, within my—I'm a product of my observation process that I came through. I'm lucky enough to have three assistant principals, chairpeople of each department, to really handle the day-to-day operations. My focus is primarily on instruction. If you lose that teacher effectiveness, the culture of high standards for teachers—and students, for that matter—will go down. We really need to—we talk about—and I spoke briefly about teacher-leaders. They're not trained to train teachers. It's good, once in a while, but principals will bring about change.

Teachers won't. The principal is the one that will bring about change within the building.

Senator FRANKEN. Thank you.

My time is expired. I'd love for the whole committee to spend a weekend at the Greenbrier and just keep bringing these people, so that we just spend, like, an amazing—am I out of order?

[Laughter.]

Senator ROBERTS. I think—

Senator FRANKEN. You just want to go endlessly with these—

Senator ROBERTS. I think with the Greenbrier, you are. I don't know about the rest of it.

[Laughter.]

Over here. You knew where that was coming from.

Senator FRANKEN. Yes. You again.

[Laughter.]

The CHAIRMAN. Sounds like an interesting week, I'll tell you that. No, that'd be good.

Let's see, Senator Hagan was next.

Senator Burr.

Senator BURR. I have a slightly different takeaway than my good friend from Minnesota. I don't think there is a silver bullet. I think what I've heard is success stories, and the tool was very different, from individual to individual. The common thread was, you bought in to the belief that this was the answer to education. More importantly, you forced the staffs to buy in to that belief. Amazingly, this is not about, in my estimation, replication; it's about a commitment, by educators and principals and policymakers, that anything less than some number is unacceptable. And I will tell you, that number is not 70 percent or 72 percent of graduation on time.

Mr. Johnson, you talked about technology a little bit, you talked about the change in students that we've seen go on. Does it trouble you that, with today's high school students who communicate totally different than I did, when I was their age, when they pick up a cell phone, they have no intentions of making a call, they're going to send a text or take a picture, yet—I do it the old-fashioned way, I want to talk to somebody—does it bother you that we still use textbooks?

Mr. JOHNSON. At the risk of walking into a conversation about the textbook industry—

[Laughter.]

Mr. JOHNSON [continuing]. I'll say that the generation is different, and they communicate—

Senator BURR. But, why not breach it? What is so magical about a textbook? Why, in a generation that thinks of knowledge as an instantaneous thing, that looks at news as accessing when they want to, not waiting until the morning—why are we so tied to a textbook?

Mr. DESHLER. I think that's a question that many people are asking. And we do want to capitalize on the technologies that are available to us. However, to solve problems and to grapple with issues and come to a deep understanding of knowledge and information, we must have students going beyond sound bites.

Senator BURR. Well, I'm not talking about sound bites, Mr. Deshler, I'm talking about downloading the textbook—

Mr. DESHLER. Well, OK.

Senator BURR [continuing]. To an electronic tool, where we totally eliminate the book bags, we end the security concerns we have in high schools. We've proven that when we put a laptop in a child's hand, we give them access like they've never seen before. The amazing thing is, there's a different buy-in on their part. I think this is not just about the buy-in that you take in how you do, or the staff takes; this is about the buy-in from the kids who make up that classroom.

Let me just ask Mr. Johnson one more thing. You stated that your No. 1 goal was to have rigorous accountability toward the graduation rate. Can you describe for me what the tools are for rigorous accountability?

Mr. JOHNSON. Rigorous accountability for graduation rates.

Senator BURR. Yes.

Mr. JOHNSON. I think that, first of all, the elements of that include the right, consistent definition across States; States setting annual measurable objectives in regard to improving graduation rate; and the third element of which includes having some flexibility for the use of an extended rate for select schools, such as Back on Track schools, tightly defined, and early-college high school, that, by definition, cannot do a 4-year graduation rate, because they're a 5-year design.

Senator BURR. Sure.

Mr. JOHNSON. On your technology question, I think that it's an important role for the Federal Government to play, in regard to inventing platforms that may tip the scale on this regard—I think it's part of the solution set—and then scaling them up appropriately.

Senator BURR. Mr. Capozzi, I heard your testimony. I understood everything you said. I didn't hear about pre-high-school deficiencies in education, I didn't hear about the lack of parental involvement. So, who, in your school, IDs those at-risk students?

Mr. CAPOZZI. At Elmont Memorial High School, it's not a K through 12 district. We have an elementary school district, the Elmont Union-Free school district, then we have the Sewanhaka Central high school district. Our pupil-personnel department does an excellent job. They articulate with the elementary schools, early.

Senator BURR. So, it's necessarily tied to: This person didn't have the same skills coming in, in ninth grade; this child doesn't have a parent that's involved.

Mr. CAPOZZI. No.

Senator BURR. This is an assessment of the individual student.

Mr. CAPOZZI. We have a saying "We get what we get, and we have to do it." You're looking at every child. When I talked a little bit about differentiating to meet the needs of all learners, we don't just walk the walk or talk the talk, we do it. It's about meeting every student's needs, whether it's in the classroom or outside the classroom.

Senator BURR. My time's expired, but I'm going to ask two questions that can have short answers.

What's the student-teacher ratio in your high school? And how long did the turnaround take?

Mr. CAPOZZI. OK, average class size, I'll say, is about 23—we're 7 through 12, so in about 7th and 8th grade, a little bit higher; about 27, 28, in the high school, 9 through 12.

Turnaround, I will tell you that—I took over, 5 years ago. I've worked at Elmont for 18 years. There was a time, where—the first year and the second year, I wanted to walk away. It was not easy. And my wife wanted to walk away from me.

[Laughter.]

VOICE: Mine wants to do that, too.

Mr. CAPOZZI. But, it took awhile. It took 3, 4 years to get that culture re-established, I'll say.

Senator BURR. I thank you.

I thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Burr.

Senator Bingaman.

SENATOR BINGAMAN

Senator BINGAMAN. Thank you very much.

Thank you all for being here.

Let me pickup on your comment, Mr. Deshler. You urge the committee and the Senate to go ahead and pass several bills, including the Graduation Promise Act, which I appreciate very much. That's a bill we've worked on for several years. One of the strengths of that bill is that it has a very specific target. The target is the 2,000 so-called "dropout factories" that were identified by the study that Johns Hopkins did. And I'm concerned, frankly, that if we don't have a real, specific target, we will wind up doing this reauthorization, and not get the funds sufficiently concentrated where those so-called "dropout factories" are.

In my State, the figures I've got are that there are 41 such dropout-factory high schools—that is, schools that have 60 percent, or fewer, of their students graduating.

When we get into the tiering business that the administration has used for the Recovery Act funds, about 11 of the 41 would actually get some funding, under that criteria.

So, anyway, I would be interested in your view on that, Mr. Deshler. Is it important that we try to concentrate on that group of schools, or is there a different way that makes more sense?

Mr. DESHLER. If we concentrate, I would say—we need to keep at least two factors in mind.

No. 1, there's a direct and unmistakable linkage between literacy proficiency and the success of turning schools around. We often try to dodge that bullet, in one way or another, and there's no dodging it. Well, there's a lot of things we need to learn about how to better deal with the literacy issue—there's a lot of things we know and enough to act on. That's point No. 1.

Point No. 2, while the schools you refer to clearly qualify for, and can benefit from, additional resources, one of the concerns that I have—as our center has worked in a lot of underperforming schools—is that money alone won't solve it. That is, oftentimes, when schools are low-performing in the classroom, they are also, infrastructure-wise, low-performing, and they lack the capacity, often, to wisely use the funds that come to them. So, I think very serious consideration should be given, as funding is allocated in

any way. What is the qualifications and the capacity to use those funds wisely and as they are intended?

I would offer those two things for serious consideration.

Senator BINGAMAN. Mr. Habit, you talked a lot about change management. Could you comment on anything Mr. Deshler said, and elaborate as to, How do you help a school to institutionalize change management?

Mr. HABIT. Well, I think he answered very thoughtfully around the issue of literacy and the foundational aspect of literacy. If I could address my comments to that, we see that it's critical that reading and writing and thinking take place in every classroom, every day, at the secondary level. So, the need to make literacy an essential part of that culture becomes paramount as we set a standard for every child graduating college-ready.

Teachers, quite frankly, at the secondary level—the historical pattern is that the English teacher is left down the hall, dealing with literacy issues, and we found that very few teachers are actually prepared for their role in helping students to read, write, and think. We know we've achieved success when we walk into a math class and a student will say, "I read and write as much in this classroom as I do in my English classroom."

Senator BINGAMAN. All right. I'll stop with that, Mr. Chairman. The CHAIRMAN. Senator Roberts.

SENATOR ROBERTS

Senator ROBERTS. Thank you, Mr. Chairman.

Let me say, to the good doctor from the University of Kansas, that I apologize for not being here to introduce you properly. I think, in part, that was because the Chairman is from Iowa, and he's still pretty proud of that northern Iowa guy that put up the three—I'm sorry to even bring it up—as you know, I went to Kansas State, and we grieved with you about that.

[Laughter.]

He was supposed to dribble the ball, you know, and he put up a three, and made it. So, I think the Chairman was just—anyway, I'm sorry I couldn't introduce you in the proper way. So, we'll both try next year.

Thank you for your testimony. Thank you for your comprehensive statement. It is comprehensive. I hope every member reads it. Your six recommendations, your endorsement of the Murray, Reed, and Benjamin legislation, especially the paragraph on the Fusion program that worked so well in Iowa, in Dubuque. Thank you for your—I truly appreciate your warning to the committee that it's not too late for the middle school child, that we really concentrate on birth to 6, but 7 to 12, we just don't do as much as we could possibly do. I am guilty of that prejudice, that if they're going to keep up, it demands change, and certainly a whole bunch of skills.

I read a lot to kids under the Reading is Fundamental program. A Coffeyville teacher started that, some years ago, way back, and then it came back again. Two hundred and sixty-one different schools participate in that. We had about 300,000 in Federal funding. And I concentrate on the second- and third-graders, mainly because the fourth-graders get a little smarter than I am, and a little snippy, so I stick with the second- and third-graders. And that is

entirely what you're talking about, that you ought to go to the middle-school folks, if you possibly can.

In Kansas, we think we have several programs. We're not really on top of it, to the degree that other Senators have referred that we need to be, especially my good friend over here, Senator Franken.

Senator Murkowski touched on the problem of rural education. I'm going to mention the name of the school where I talked to the second- and third-graders, and then the principal asked if I had time for a special program for middle-income kids, and I said, "Sure." I wasn't going to say "no." I went in, and the whole thing was different. The whole attitude was different. We had some kids there—well, a great majority of kids, who, (a) didn't want to be there, (b) were bored to death, (c) there was actual fear about going on to the next grade, for fear they couldn't compete, and the peer pressure involved.

I started to read a book that was ridiculous, then I said, "Why don't you read to me?" That also proved to be not worth much. So, I said, "Why don't we just have a discussion about what language you speak at home, and what do you want to be? If you could be anybody that you wanted to be"—and obviously you got the sports hero, then you got the movie star, and you got this, that, or the other thing. And I said, "I'll tell you what. If you're a movie star, you've got to read the script. If you're the star quarterback, you've got to know the play, you have to know the offense." Then I got to thinking about it, and I wondered—I asked the teacher, and they said, "Well, we're doing the best with these kids, but, you know, there are just some of them that are not grasping what we need to have them do to really compete." Then, on page 9, you really refer to it, where people are ending up in jail, divorcing, not being a contributing member of the community. That's largely the base of a problem that we have in this country today that we're using other methods to try to solve, and we're not solving it the right way, or we could do it a lot better.

Where do we find the teachers to do this? I mean, we don't have teachers to teach, period, out in the rural areas of Kansas. You know that. I just don't know—it would seem to me you're going to have to educate the teachers before you educate the middle-school kids to really get the total-school involvement, so these kids do not have the sense of fear and simply want to drop out and get a job at the local packing plant, girlfriend drops out, boom, they have a youngster, and the whole cycle starts over again.

Mr. DESHLER. One of the challenges we've got in all of education is getting into our teacher-preparation programs the best of what we know how to teach students. I think there's much more of what we know than actually what we do. If we can bring all of our teacher-preparation programs up to the highest standard—and there's many who are doing some great work, but in many instances, we do not arm teachers with the competencies that they need to, first and foremost, engage students, to make schooling and learning exciting.

Senator ROBERTS. Right.

Mr. DESHLER. Where they want to be there, they feel valued and—

Senator ROBERTS. Right.

Mr. DESHLER [continuing]. Counted. Second, to have the proficiency, as a teacher, to teach students the critical skills that they need, to read, to think, to express themselves, to write. When you have students doing those things, they get excited about performing and doing, and engaged in the learning process. Teachers get excited. The kind of culture in schools that we've heard about this afternoon starts to emerge, and then students really start to achieve in extraordinary ways.

Senator ROBERTS. Well, I thank you for commitment.

I thank all of the witnesses. I know it takes a lot of time to come up here and give testimony.

I thank the Chairman for holding this hearing, which I think is exceedingly important.

Many thanks. And I will be paying you a visit.

Mr. DESHLER. Thank you.

The CHAIRMAN. Senator Hagan.

Senator HAGAN. Thank you, Mr. Chairman. I really do appreciate this hearing.

In your opening testimony, Dr. Habit, you mentioned a "cancer in education," and you said that, "Simply put, low expectations are a cancer that can weaken a school enough to make significant changes in teaching impossible."

When we're looking at the early learning and the dual-enrollment, the middle-colleges, can you give me a further explanation on how these programs can impact and make significant changes in this cancer?

Mr. HABIT. I think a theme of this afternoon's conversation has really been about that, and the crisis of low expectations. And if you are a teacher who has never seen or been in a classroom where all students are fully engaged, and all students are working at high levels academically, why would you believe it could be done? Why would you believe that could happen? So, we spend a great deal of time working with our faculties around this notion of expectations, and exposing them to classrooms that get those results, and then, over time, equipping them with the tools and skills and beliefs so that they can deliver on that promise.

If I could add, I think in the conversation, earlier, about the colleges and schools of education, there are many exciting programs happening there, but this we see as sort of ground zero. There needs to be a great deal more work done, exposing pre-service teachers and principals to classrooms that succeed with all, and not some.

Senator HAGAN. In your opening comments, you talked about the difference in the achievement gaps—how do the new innovative high schools make achievements in that area?

Mr. HABIT. I think that, with the early-college high schools in particular, it's often described as the "power of place." Removing young people from a conventional high school, where their peers and/or their teachers may be pulling them down and pulling them away from the academic mission. By moving them on to the campus of a college or university, you are really, then, constituting a culture about high expectations. They begin to see themselves as high-school completers, and then begin to see themselves as col-

lege-completers. But, it's as much about putting that team of teachers within that environment so they can incubate a culture that is highly results-driven. Not to be too critical of conventional high schools, but unfortunately conventional high schools often are driven by things like the number of seats in the cafeteria and the schedule that that allows that school to have. Early-college is driven by a very, very crisp academic mission.

Senator HAGAN. Do you see any problems with parents accepting a change like this?

Mr. HABIT. It's very difficult. We work in more than half of our State's school districts in partnership, and in some of them, parents do not believe that all students need Algebra 2, for example, do not believe that all students can master Algebra 2. So, the role of growing the beliefs of parents, as well as classroom teachers, can't be overlooked.

Senator HAGAN. Senator Roberts talked about this, Mr. Deshler, and I was very surprised to hear your comments about the fact that only 20 percent of funding is going to grades 7 through 12. I was very surprised to hear that. What sort of recommendations would you make to change that?

Mr. DESHLER. Well, I think the first recommendation would be that we need to understand that students at that age, if they're having difficulty, can indeed learn, as I mentioned before. It is not too late. We should not treat them as "throwaway kids." Many of our policies up to this point, I think, in reality, have done that.

Senator HAGAN. Is that low expectations of the teachers?

Mr. DESHLER. Yes, it's low expectations, oftentimes, for teachers.

Second, we often fail to give teachers the kinds of skills and competencies that they need to really get some traction with students so they can get them onto that path of being successful.

Then, third, we need to make some tough policy calls, in terms of—there are needs for students, for half of their school year—the school career, 6 through 12 that we really need to start tending to, because the demands that they are facing literacy-wise, emotionally, and the social pressures, are so significant and so different than when we went to school. We need to arm schools and arm teachers with the kinds of skills and supports that they can really make some headway to give students the kinds of skills and competencies they need.

Senator HAGAN. With 70 early-college high schools in North Carolina, I'm proud to be a cosponsor of the Fast Track to College Act, which is legislation introduced by Senator Kohl. This legislation authorizes a competitive grant program to provide schools serving low-income students with funding to establish and support these early-college high schools.

Mr. Johnson, I know that your organization worked closely with Senator Kohl in developing this legislation, and I know that you recognize that, without innovation and intervention, we will not be able to meet the workforce needs of our country.

As I commented, finding ways to replicate the effectiveness of early-college programs on a national level should be a top priority in the reauthorization effort we're undergoing right now. What sort of supports and resources do States need in order to implement early-college programs? Does every State need a not-for-profit orga-

nization like the one that North Carolina has in the New Schools Project to partner with these States?

Mr. JOHNSON. Another State that has another, kind of, State intermediary is the State of Texas, leading the way in scaling early-college high schools. The State of Texas is also looking at Back on Track models, particularly models for those who are old and far, that may even need a GED-type option that's connected to a post-secondary opportunity—

Senator HAGAN. "Old and far" means what?

Mr. JOHNSON. "Old and far," 16, but many credit hours from obtaining a high school diploma. There's a way of thinking about the population—about off-track students, and one of the subgroups are the "old and far," and you have to look at the different models.

So, back to your question around the State role—that in this budget-type situation, it's a very difficult time to think about a State-run intermediary serving this role. So, we have to look at the Federal Government's role in supporting the State and building out such partnerships, because whether or not the State has the capacity, internally, to actually do the scaling work itself is questionable in most cases, and we've shown in North Carolina and Texas that the power of a New Schools Project or the Texas High School Project of providing political cover, of ensuring integrity of running the design, having professional development—Tony talked about the structural coaching component of it. Those are key technical assistant elements that need to be put in place. Conceivably, they could be shown to be effective in a department of education, for instance, but our experience has been that some type of relationship with an outside intermediary actually results in a better scale of these models.

Senator HAGAN. Thank you.

You know, Mr. Chairman, I was co-chairman of the Budget Committee in the North Carolina State Senate, when the early-colleges legislation came forward, and we did line items for coaching, for mentoring, and the fact that these young people can go to high school and, when they graduate go to a community college campus or a university, and have 2 years of college credits, is extraordinary. The fact that parents are not paying money out-of-pocket for this, it's a big impetus on a lot of students, and especially those that have already dropped out or are thinking about dropping out.

Thank you.

The CHAIRMAN. Senator Sanders.

SENATOR SANDERS

Senator SANDERS. Thank you, Mr. Chairman.

Thank you all for being here, and thank you for the work that you're doing.

What I want to do is just throw out a couple thoughts, and anyone who feels like it, please comment on it. You guys are on the front lines of the educational struggle facing our country. We heard, a couple of months ago, testimony from a fellow who studies worldwide standards and raised a lot of concerns about how our kids are not really competing against young people from around the world. I want you to think about that and tell me what your understanding is about that.

Second of all, in terms of our national priorities, we have the highest rate of childhood poverty of any major country on Earth, far higher than most of the European countries; and we end up with more people in jail than any other country. What do you think about that?

I think it was Mr. Capozzi who used the term "culture of high standards." Do you think, as a nation—and we know that, when the NCAA Final Four—you can't turn on TV without everybody talking about which team's going to win—do you think, as a nation, we really take intellectual development seriously? Is it something that, as a nation, we really believe in, or are we kidding ourselves? Are you having to, kind of, fight against the trend? Are these kids saying, "Hey, I want to be a great basketball player," "I want to be a great football"—"I want to be rich." "I love these guys on Wall Street who made a billion dollars last year, sleazy though they may be. I can make quick money. Why do you want me to be a scientist? Why do you want me to be an engineer? Why do you want me to be an English professor? Who do you guys—are you kidding? I want to make money quick."

I also want you to think about, and talk to us about, the childcare situation, something which I worry about a whole lot. I know, in Vermont, it is very hard to come up with quality, affordable childcare. Many of the kids who are coming into school are already—especially from low-income families—already pretty far behind, in a gap, perhaps, that they'll never overcome because their parents, mom and dad, are both working, or mom is working, and the kind of childcare and early childhood education they're getting is inadequate.

So, those are some of my thoughts, and I'd appreciate anybody responding to them.

Mr. Capozzi.

Mr. CAPOZZI. As far as kids growing up and swimming against the tide, are we banging our heads against the wall? Growing up, I don't think, really, is any different than me wanting to be Mickey Mantle. I did want to be a pro baseball player, just like, today, kids want to be LeBron James. We had kids from Elmont Memorial High School who are also Intel's semifinalists. One went on to Harvard University last year. I think—our challenges are different, but I just think we need to focus on, How do we face the challenges?

The challenges for kids are different. We're the adults, and I think we have to help them find out how to deal with the challenges. I don't think college—college is an expectation. If you walked into Elmont Memorial, every one of my students feel as though they're going to go to college. Yes, they do want to be a professional basketball player, but I think reality—

Senator SANDERS. Well, my point was—I understand that.

Mr. CAPOZZI. OK.

Senator SANDERS. I agree with that. But, my point is, as a nation, Do we appreciate, and are we inculcating our young kids with, the understanding that intellectual development is a good idea, in addition to being a great basketball player?

Yes, ma'am.

Ms. WEBBER-N'DOUR. I don't think we are. In addition to that, I think there's a culture of students feeling that it's not cool to be

intellectual. So, to create a culture of high intellectual capacity within a school is fighting against the tide, because you're fighting a subculture, and then you're fighting the majority culture, which is seen on television.

Senator SANDERS. How do we turn—I agree with you. Then some people say that's more in the minority community. I'm not sure that that's the case. I think it's—

Ms. WEBBER-N'DOUR. I'm not, either.

Senator SANDERS [continuing]. It's pretty prevalent. How do we turn that around to say that, "If some kid wants to study hard and become an engineer, you know what, that's pretty cool?"

Ms. WEBBER-N'DOUR. I think one of the ways we do it is by the early-college movement that we're speaking of now. Instead of pulling from the bottom and trying to bring it up to the top, try pulling from the top, because everyone really can do better.

The other thing I wanted to say, about childcare—

Senator SANDERS. Yes.

Ms. WEBBER-N'DOUR [continuing]. It's not just the children, the young infants that are at stake, but in high school, for example, I see so many students whose work suffers because they are the childcare givers. They're the ones who run home to pick up brothers, sisters, and the like. I don't think that any of us fully appreciate the far reaches of poverty on children.

Senator SANDERS. Are many of the kids—you've raised a very interesting question. I was amazed that, in high schools in Vermont, you ask the kids, "How many of you kids are working after school in McDonalds?" A huge numbers of kids are working. Do you run into that, as well?

Ms. WEBBER-N'DOUR. Absolutely.

Senator SANDERS. OK.

Ms. WEBBER-N'DOUR. Absolutely. Especially since we're a career academy, so we highlight work ethics. Fortunately, many of them have other opportunities, because we provide other opportunities for careers. But, kids are working because they have to.

The other thing I just wanted to mention briefly is that kids eat lunch at school because sometimes that's the only meal that they're getting that's a decent meal. If you're lucky, it's a decent meal.

Senator SANDERS. OK. Other thoughts?

Mr. Harrison.

Mr. HARRISON. Yes, I want to go back to—really, the national ethos around teachers. There has to be some language that really ensures that, every school building, teachers are wearing that character and modeling the values that we need to shift in our country. It's a battle, when homework is up against TV. But, again, every teacher has to wear those expectations and communicate to students that success is really important, that we value learning, we value higher education, we value making mistakes in learning. I think that if every teacher in every classroom, every school leader, can communicate that, over and over again, and really wear those values, and really understand that school has to be more exciting if we're going to compete with TV or the—

Senator SANDERS. I agree with that, but in your heart of hearts, as a culture and as a nation, do we really say, "You know, teachers are doing some of the most important work imaginable?"

Yes, Mr. Deshler.

Mr. DESHLER. I think you're asking a highly significant question. We don't properly showcase the importance of intellectual growth and achievement and hard work. You made reference to the difficulties within families—mom and dad working, and so forth. But, we need to give thought to, How can we reestablish and strengthen families to provide the kind of support, and have those conversations with their children, and to provide the emotional fabric to give them encouragement?

When we look back at the early years of our country, there was an awful lot of poverty that characterized our way of life then, but there's something about the family being together as a strong unit. I think we need to try to learn some lessons from what happened there. That won't solve it all, but I think often we ignore the powerful role that a strong family can play in inculcating those kind of values.

Senator SANDERS. Chairman, thank you very much. My time is long expired.

The CHAIRMAN. Senator Bennet.

Senator BENNET. Thank you, Mr. Chairman.

Mr. Harrison, I wanted to ask you a question, based on something you had said, because you observed that you have a lottery for kids that come to DSST that now come into the sixth grade and the middle school. I think one of the things that really ails us, as policymakers, at every level of this equation, is that, too often, we don't look at this from the child's point of view, from their prospective. I wonder if you could describe for the committee what it looks like to come to DSST as a young person who's behind in reading and math and other subjects, and what it looks like for a young person that comes in at grade level. Does it look the same?

Mr. HARRISON. Yes, I think that's a great question. I always tell people that the hardest part of my job is saying, "no" to the number of families that are on the wait list in the city of Denver who want to attend Denver School of Science and Technology. It really comes from both groups of students—students who want the opportunity to be in a school where they're going to be caught up and be on the track to college, and for those students who are on grade level, who want to be part of a successful program.

At the end of the day, the students still wear the same uniform. The students still receive praise. We value growth. We value growth more than achievement, so we want to praise those students who are making gains. That may be a student in the sixth grade, on a second- or third-grade reading level—who's made significant increases in 1 year. They may have to be retained and do the sixth grade again, but they're proud of being part of our school.

I think there's a way that we manage the culture around really keeping those kids together. And I think that the students who are on grade level understand that and support that, as well.

Senator BENNET. I asked the question poorly, that was a great answer, but it wasn't the answer to my question, which is, If I'm a child that comes in, and I'm reading at a second- and third-grade level when I get to the sixth grade at DSST, what does my day look like? What does my year look like at DSST? How are you going to get me from where I am to where I need to be?

Mr. HARRISON. I think that's the flexibility that I have, as a charter school principal, around making sure that there's a lot of time and investment around catching those students up. A student who's been behind a grade level in reading—all students take a 2-hour English block, the literacy block, but those students who are behind take an additional hour. We have some students who take 3 hours of English instruction every day. But, that's what it's going to take for them, to get them on grade level.

The same thing with math. We have students who take 2½ hours of math a day. And, you know what, if we need all students at pre-calculus or calculus by the time they're seniors, that's what it's going to take for all sixth-graders who are behind, really getting those intervention supports. That's coupled with—you know, there's a programmatic aspect, and then there's the aspect of building relationships, to really getting the kid to understand that they need to roll up their sleeves and get a lot of positive work done.

Senator BENNET. Thank you.

Mr. Habit, I had a question for you. You mentioned that the early-college programs in North Carolina are generally situated on college campuses, and that the kids that go are able to get the college credit without cost to them, I think you said, or to their families. Can you explain to me how that funding works in North Carolina, the higher-ed pool versus the K-12 pool? How did you sort that out? That's been a challenge in my State.

Mr. HABIT. I think that's a challenge for every State. It leads to lots of debate about the funding streams, and so forth. In our State, we've had a working team of our education cabinet, over the last few years, to continue to sort through, decision by decision, how to get the best out of the resources that are available. So, a student moving on to a community college campus, for example, the community college would be reimbursed for the FTE for the course that student is enrolled in when they're in a college course, versus when they're on that campus, enrolled in a high school course being taught by one of their high school teachers.

Senator BENNET. So, in other words, you've applied common sense to this question.

[Laughter.]

Mr. HABIT. Yes. But, actually, the point that often gets overlooked is the cost of textbooks, because—if you're involved in post-secondary education, you know that's a big issue. Our State has been very committed, thus far, to paying for the textbooks for those students enrolled in those college courses.

Senator BENNET. Thank you Mr. Chairman.

The CHAIRMAN. Senator Merkley.

SENATOR MERKLEY

Senator MERKLEY. Thank you very much, Mr. Chair.

I want to thank you all for your work on the front line of education.

I was out, this weekend, visiting with a superintendent in rural Oregon, and she made a couple of points I found fairly interesting. I wanted to share those and get your reactions to them.

The first issue is that more diverse schools are much more likely to be labeled as failing, in the sense of not meeting annual yearly

progress. The superintendent showed me a comparison between one of her schools and another school. She had, I think, seven breakouts, if you will. This other school had a single population and no breakouts. Her students, in the same area as the other school, were doing better than the other school, but she had six other areas where she could end up being marked as failing to meet annual yearly progress. So, she had a far more difficult challenge of meeting AYP in all the subgroups, and yet, much more likely to be labeled as failing, even though she was doing better than this school that wasn't labeled as failing. And she said, "You know, it's a problem, because it basically creates a greater challenge for diverse schools, and it's not a fair measure," because most of her subgroups were doing far better than this other school, that wasn't labeled as failing.

Second, the superintendent also said poor schools are much more likely to be publicized as failing schools. The reason why is because when you fail to meet AYP for a couple of years, and either the choice provision is triggered or the supplemental education services is triggered, then you have a big public interaction about these features that really brings it up again and again. Whereas a more affluent school, that isn't a title I school, could be doing a worse job, but, they send out one card in the mail, and people kind of forget about it. The poor schools are more likely to become framed as a public failure, even if they're doing better than a more affluent school and cause a loss of morale or a flight from that school and other bad effects.

The third thing the Superintendent pointed out is that, when you turn to triggering the supplemental education services, 20 percent of the title I funds go to tutoring. She showed me this card, that I have right here, as an example of the types of mailings that her students get. It's designed to look like a little laptop computer, and it says, "Hey, sign up for this and you'll get a free computer." She said other private tutoring firms were giving away free iPods to get the students to mail in the cards. It costs her \$60 an hour for these private tutors, who are not even required to be college graduates or basically be capable in any certified way. Meanwhile, her teachers cost \$20 an hour to do the tutoring. So, it costs three times as much. Plus, by doing small groups, they can get a lot more mileage out of that single teacher at \$20 an hour. The result is that it is 10 times more expensive to do this private tutoring, that kids are being talked into doing, by being given free gifts when they mail in this coupon. Well, this is a problem, for a school with limited resources, because they're getting far less effect on the education of the children.

The Superintendent pointed out these three things, and I just wanted to see if you all had any comments on them.

Mr. JOHNSON. I'll take the supplemental educational services one; same as the last one, I'll take the last one. In the context of this hearing around secondary schools, first of all, supplementary educational services have not been shown to be very effective, across the board. But, as tailored, and as specific to secondary schools, it's not well designed for some of the unique challenges of high schools. So, in the reauthorization, I think it's important to look at, whether it be a high school improvement system or such,

that we actually tailor the solutions and the interventions that actually work in high school. Credit recovery, intention to structural services, supports and such, and supplemental educational services is not a good proxy for that. So, this would be my firm statement on that.

Senator MERKLEY. Thank you.

Mr. CAPOZZI. As far as making AYP and subgroups, my school, close to 2,000 students, we had 60 students in special education in grades 7 and 8. We didn't make our AYP in that subgroup in 2 years, prior to when I was the principal, when I took over. If we did not make our AYP in one of those subgroups again, in math and English, there would have been school choice. So, 60 students were really—we were being held hostage from 60 students in two subgroups. We were publicized that we were going to be put on the list if it wasn't corrected.

New York State had a—I believe it was a 31-point—there was a safe harbor after that, and then a 31-point addition to your safe harbor. And, with that, we did make it. I believe that's no longer there anymore.

To hold an entire school hostage, from 60 students in two grades—it's such a small percentage—so, it really does affect the school, and it affects the community, as well.

Senator MERKLEY. Are you saying that—I missed the point you made about a safe harbor that is no longer there. Could you explain?

Mr. CAPOZZI. Yes. There is a safe harbor. If you don't make your AYP, you're given a safe harbor. It's a number to—that's your number that you have to make.

In addition, if you're short of your safe harbor and you have a participation rate of—I believe it's above 90 percent–95 percent—you are given an extra 31 points, I believe; and that takes you to your safe harbor. Hopefully. It was a safety net that was taken away. So, I know this year is the first year that it will not be given to subgroups to make their safe harbor, or AYP.

Senator MERKLEY. Any other comments? Any comments about the practice of using laptops.

Yes.

Mr. HABIT. I thought there was a great deal of validity to the observation you just shared about the cost and how efficiently to go about that. There really is no way to get around the fact that a highly effective and focused teacher working with the student over the long haul is the best solution. I'm reminded, a few days ago, of talking to a teacher in one of our schools—who knows a student so well, knows that student's family so well, that she recognized that what her student needed was Saturday work and after-school work around Algebra 1, and she knows the diagnostics around that student, and doesn't have to relearn his needs and styles, and that is, in my perspective, in our perspective, the most efficient way to go about accelerating a young person.

Mr. DESHLER. Yes.

Senator MERKLEY. Yes.

Mr. DESHLER. I have no problem with them making laptops, iPods, available, and teaching kids how to use them in the correct way, as Senator Burr mentioned early. What does concern me is

your other observation, that the tutors that these students are working with don't have the kind of proper training to make them effective tutors. That's the big concern.

Senator MERKLEY. I am over my time, and I thank you all very much.

The CHAIRMAN. Thank you.
Senator Reed.

SENATOR REED

Senator REED. Well, thank you very much, Mr. Chairman. Thank you for holding, again, a very impressive hearing. Thank you, to all the witnesses, for excellent testimony, but, also, when you leave here and you go back to the schools and back to the universities you continue to work hard, and I appreciate that very much.

The focus is secondary schools. I want to thank Dr. Deshler for mentioning Success in the Middle. Because before secondary school, there's the middle school. One of the issues that comes up perennially with respect to secondary schools, is the dropout rate. You know, that's kind of, the shorthand for how you're doing. But, a lot of what you have done—and I know Mr. Johnson, particularly—has been with respect to those indications in the middle schools, of potential dropouts, in terms of looking at the early warning signals. Sometimes I get the sense that we're focusing a lot on the last few years—efforts that are probably not as efficient as, focusing on the first few years—in the middle schools. I wonder, Mr. Johnson and Dr. Deshler, if you wanted to comment, and anyone else on this sort of issue of early warnings, middle schools, and preventing dropouts.

Mr. JOHNSON. Well, the research is pretty significant and instructive, that we can tell, as early as sixth grade, with high predictability, who's going to drop out. I think that whatever solution the committee comes up with, they need to take in consideration the success and what it does about intensive interventions as early as sixth grade to get those young people back on track. It's an important part of the solution, it's important—a part—about sustaining the supports that we see in making gains in our early years, that we're not seeing sustained through middle and high schools. So, I think that's right, yes.

Senator REED. Dr. Deshler.

Mr. DESHLER. The power of highly effective educational experience on the academic side and the social side during the middle school is so pivotal. When students—as well as—deliberately planning that transition into the high school, and that we don't just take that for granted and leave it up for luck, that it will happen correctly. There's some very exciting and encouraging work that is being done on, "How do you put in place effective transitions from middle school to high school?" But, a part of that is really having students geared up with the proper skill sets so that when they go to high school, then they can benefit from a challenging curriculum when they get there.

Senator REED. Mr. Capozzi and Mr. Harrison and Ms. Webber-N'Dour, you are on the front lines. I don't know, maybe—I feel, some way, that high school principals shoulder the responsibility for dropouts. But, by the time the youngster gets there, as Mr.

Johnson suggests, the indicators were already there, and the effective interventions are delayed by years. So, I'm just wondering what reaction you have, Mr. Capozzi, Mr. Harrison, and Ms. Webber-N'Dour.

Mr. CAPOZZI. What we put in place—what we look at, No. 1, is where students are. In ninth grade, I have spoken about our interdisciplinary teaming program, that we will be implementing this year. We have safety nets in place. We get kids who aren't reading at grade level. We have programs, like READ 180, to catch students up. I would love to see it in the lower grades, because we're getting them in seventh and eighth grade, and, really, we're afforded the opportunity to put programs in, such as READ 180. We have language enrichment. We are a title I school. Our free and reduced lunch, I believe, is 33 percent. So, with that title I money, we do utilize that, to level the playing field, with the literacy programs.

Senator REED. Thank you.

Mr. Harrison, please.

Mr. HARRISON. Yes, I wouldn't be surprised if Mr. Capozzi's intervention systems—you know, they're the same in the middle school, as well. I think that really thinking about making it systematic, in terms of what intervention looks like—from kindergarten through 12th grade—because, at the end of the day, it's the same system that we're going to use and really holding school leaders, like ourselves, accountable for making sure that the growth happens from the students who come in at those levels. That's something that I would feel comfortable, as a school leader, to be held accountable to. Because, at the end of the day, if those students aren't moving, we're not doing our jobs.

Senator REED. Ms. Webber-N'Dour.

Ms. WEBBER-N'DOUR. Something that Dr. Alonso, of Baltimore City Public Schools, recently started to do, and started with our school, is to annex failing middle schools with successful high schools. So, next year, I will take over a failing middle school. The thought in mind is to use the successful model we have and make a seamless transfer of information, both in terms of curriculum and culture, so that both schools are mirroring one another.

The other issue that is of interest to me is to try to accelerate the students, that are already doing exceptionally well, into the high school forum in the similar way that we're doing with early-college.

So, this is a model. It hasn't been testing out fully, but I'm sure it's going to succeed. High school teachers will make the decisions as to what the curriculum looks like in middle school, because we know best what the high school student needs.

Senator REED. Mr. Habit, do you have a comment, or—

Mr. HABIT. I just think it's a critical issue. We're exploring the ramp-up strategy to incorporate middle grades so that they're prepared for the rigors of ninth grade. If that goal of that high school is truly college readiness, it's got to ramp up in the middle grades.

Senator REED. Right. Just an observation, because my time is expired, but one of the things that I think we have to deal with is that too many principals are not educational leaders, because after monitoring buses, collecting the candy money—well, we don't do

that anymore—but all the extracurricular activities and I just wonder, am I off, or is that something that you sense, too?

Mr. CAPOZZI.

Absolutely. Running a school is a tremendous undertaking. It really is. I often say to myself—every day—there's one incident that you say, "They didn't teach me this in principal school." It is just overwhelming at times, and if it wasn't for my assistants—I have quality assistant principals, quality chairpeople, and it definitely helps. It is overwhelming. I don't want to be a manager, I want to be an instructional leader.

Senator REED. No, and that's the model, but we organize schools so that principals are managers, budgeters, etc. That's what they get hired on, and that's what they get fired on, in many cases.

Mr. CAPOZZI. Absolutely.

Senator REED. Like everything I learned in kindergarten, everything I learned in the Army. I had 1st Sergeants who did all that stuff when I was a company commander, thank God, because I wasn't that good of a company commander, but they were—

[Laughter.]

Senator REED [continuing]. They did all that, and I was expected to be a tactician you know, doing all that stuff.

But, as I see the principals in my home State—you know, they just don't have the time to be the educational leaders they want to be.

Also, to be honest, some are drawn to the job because they don't have to do educational leadership; and those are people we don't want as principals.

But, thank you so much.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Hagan.

Senator HAGAN. Thank you, again, Mr. Chairman.

I really do appreciate all of the testimony we've heard today. It's been excellent.

One comment came up earlier in the hearing, regarding the length of the school day and year, when our students are looking at competing in a global economy today. I'd love to hear your comments on the impact of a longer school day.

Please.

Mr. HARRISON. Sure. When you're behind in math or reading, you have to put in the extra time. We have students come in for summer school to get caught up, we have students staying until 5 o'clock, getting tutoring. We have tutoring provided by our teachers. They invest an hour, after school, by department, to catch students up. And it does take time. That's a factor that should definitely be in the legislation, in terms of really making sure that there's certain protocols in place, particularly time, to catch students up.

Senator HAGAN. One of the things that I've read is that, by the time a student graduates in the United States, they are practically a year behind their European counterparts, who have had a much longer school year.

Yes.

Mr. DESHLER. Yes, I would add to what Mr. Harrison said, that, yes, if students are behind, we do need more time on task, more

time in instruction. However, we've completed some studies, within our research center, that tells us very clearly that we're not currently using, optimally, the time that we do have.

Senator HAGAN. So, what do we need to do?

Mr. DESHLER. Well, just adding extra time is not going to necessarily solve it. We need to, with that time, be adding it—or the time we're using now—is to check, “How are we using it? How much time are students not engaged, or are teachers not engaged, in active instruction?” so that we're fully utilizing the available time that we have.

Senator HAGAN. Do you have any examples or recommendations?

Mr. DESHLER. Sure. Well, in a study that we just completed, about 24, 25 percent of time during a classroom period, the teacher was not involved in active instruction. They were doing administrative things, e-mail, and so forth. So, I think some of the things, as Mr. Capozzi has said—you know, our primary mission is instruction—

Senator HAGAN. Right.

Mr. DESHLER [continuing]. And it's not all of the administrative things that are needed to keep the school moving. But, it is that culture that says, “Our job is instruction,” and there are certain things that we do during instruction that are paid greater dividends than other things, such as teacher modeling, elaborated feedback, scaffolded learning, and so forth. Then you really see student gain.

Ms. WEBBER-N'DOUR. Yes, I just wanted to say that my school is a turnaround school. We were in the 30 and 40 percentile range when I came in as principal. We're now in the 80s and 90s. We didn't do that by adding any time to the day; in fact, I took away programs that were ineffective—Saturday programs that were not working, after-school programs that were not working. The emphasis had to be put on a 90-minute block, and what are you actually doing with that 90-minute block? How qualified is the person in that classroom? So, I don't think that more is always more.

Senator HAGAN. Dr. Habit.

Mr. HABIT. Yes, I'd just agree with what's been said. More of the same is exactly what's not needed. Some earlier questions from the panel had a lot to do with the need to engage young people by redefining what it means to be an effective teacher, which has a lot to do with inquiry and classroom collaboration and real-world connections.

Senator HAGAN. I have one last question. The goal of the early-college high schools is to keep the at-risk students in school by eliminating the divide between the high school and college, and to provide them with the opportunity to excel in a different educational setting. Are there specific criteria that are used to identify students who could benefit from attending an early-college high school? If so, how can we ensure that we're targeting the students who will actually benefit the most from these programs?

Mr. HABIT. Well, I'll respond—

Senator HAGAN. OK.

Mr. HABIT [continuing]. Quickly, because that's obviously an area we're spending a great deal of time on, along with Cassius and Jobs for the Future.

I think that there is a great deal of conversation about this. There are discussions every day; but, generally, they come down to this: identifying young people, who, with extra support and extra time, can achieve at much higher levels, who have, maybe, not met with success in conventional schools, and who were typically the first in their family to attend and/or graduate from college.

If I could add—earlier, you made, Senator, some conversation or, comments about the design of this work. We've had a history of very ad hoc approach to reforms and innovations. When we look at early-college in North Carolina, and our other redesigned schools, we look at some very tight core design principals, where it's really not a pick-and-choose, it's a matter of a whole implementation of the model, a true fidelity to the set of design principles that are associated with highly successful early-colleges.

Senator HAGAN. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Hagan.

Well, I thank all of the panel. This was a very instructive session.

We've spent a lot of time, as you know, on elementary and secondary education, but I think we haven't focused enough, in the past—I'm hopeful we'll do that this year in the reauthorization—on the middle-school area. It seems to me that everyone's saying that you can identify these kids, you can find out, when they're in sixth or seventh or eighth grade—you can begin programs, that will challenge them and get them on a graduation-rate basis so that they'll be graduating, and that they will be ready for college—not just graduating, but they'll be ready for college or a career. It seems to me, you all talked about individual—I was just taking notes here—it seemed like everyone talked about the importance of individualized kind of focusing, not putting everybody in one big group. Well, I suppose that's kind of tough, to do that, with limited resources. But, you all seem to be doing it. There are these schools, like Mr. Capozzi's school and others, if you—not “if,”—since what you've done has been so remarkable, how can we take that model and move it around the country? I mean, how do we incentivize? You all spoke about initiatives, incentives to get schools to do things. So, if there are models, like yours, that are out there, have done great things, well, what's the problem? Even in your home State of New York, what's the problem with taking your model and sort of replicating it? Obviously it's working. Well, why—if you can't do it on a city or county basis, or State basis, how can we do that on a national basis? I'm intrigued by this, why we can't take these examples.

Mr. CAPOZZI. Senator Harkin, so am I. When you look on Long Island, alone, and you look at minority schools, it really is horrific. The graduation rate is 60, 70 percent. My students get 94-percent Regents diplomas. We're at 50 percent advanced Regents diplomas. I wish that I had an answer for you, where, “Why aren't more people coming to see us?” I don't really know if I want all these people to come and see us, but it is being done, and everybody should know that. And the foundation is effective instruction in the classroom.

Mike Schmoker, in his book, "Results Now," talks about the No. 1 factor being the effective teacher, and I think that what we need to do is get the word out.

The CHAIRMAN. Do you really do an outreach to parents, bringing them in? And how is that done? Teachers only have so many hours a day, you know.

Mr. CAPOZZI. Well, that's really two issues. No. 1, I would love to have more parent involvement. I believe that the parents of Elmont Memorial High School—and it's been this way my past 18 years, where they really leave them on the doorstep, trust us and say, "You know what, we trust that you're going to provide our students with a great education." Well, that's good; however, I want more parent involvement. That's not good enough.

The other part is keeping the parents engaged. You know, we run title I programs, with parents. We're a title I school, so we run title I programs. It's not an easy task.

The CHAIRMAN. Mr. Harrison, you wanted to say something about this?

Mr. HARRISON. I think Denver, in Colorado, is a really unique place. Denver Public Schools is encouraging the top-performing charter schools to replicate, and supporting them in those efforts. Really, that question of scale and replication, that's really hard work. But, again, when the district is supporting charter schools to replicate to meet the needs of a diverse group of students, I think that's really central. I think the reason why that's happening is that—when Senator Bennet was the superintendent of Denver Public Schools, he encouraged principals to go see what's working. So, I've hosted a number of district principals, who've come to see how we do school culture, how we do math instruction. Yesterday, I even spent some time in southeast DC, looking at highly-performing charter schools that are doing great things here. Again, that learning has to happen, but also there has to be a partnership that really allows for highly successful schools to replicate and scale, and really providing them with the funding to do so and make a larger impact on student achievement.

The CHAIRMAN. Mr. Johnson.

Mr. JOHNSON. I would say two things. From the Federal perspective, nationally, I think there are two roles.

First of all is to strengthen the supply of these quality options—and they're here, they're out there, they're here at this table, they're here beyond this table—and strengthen the role—the supply, rather—and recognize there's an important role to play for the Federal Government in inventing new models and strategies for some of the intractable issues that we still haven't had a lot of success with.

It's like my father used to say, "Know what you know, and know what you don't know." What we don't know, we need to get to the business of inventing solutions for that.

The second piece for the Federal, nationally, I think, is to use the formal grant-making process as a lever to get States and districts to look for strategies and look for these type of solutions, and to install them in their communities throughout the country. I think we see, through the Race to the Top competition, through the School Improvement Grant competition they are already funding

that States are reacting to this. We can have a conversation, another day, about whether this is the right set of strategies as such. But, the fact of the matter is, we are seeing tremendous activities in the department of education, in districts, collaborating in ways we've never seen before. I think that it's an important and an instructive set of activities as we move forward with this reauthorization.

The CHAIRMAN. Well, hopefully within the next month or so, we're going to have States agree to a common core of standards. We haven't had that for a long time—well, we've never had that. So, maybe you're right, maybe we're getting to a thing where more and more States are saying, you know, there's a place for innovation and change, there's a lot of different models, but there ought to be some core standards that everybody adheres to. Hopefully we'll have that soon.

Yes, Ms. N'Dour.

Ms. WEBBER-N'DOUR. I just wanted to say that—you asked what it is that we need to replicate—it's really the people, that we have to replicate. The model, the type, the form, none of that matters if you don't have the right person at the helm. Then we really are talking about trying to get people to understand what it is that Mr. Capozzi does, or what it is that Mr. Harrison does, or who he is. What qualities does he bring with him? What expectations does he have for his students? How does he select teachers? It can't rest with the teachers, because there are 40 or 50 of them. It has to rest with the principal and their ability to select, their ability to understand culture, their children, and so on and so forth. It really boils down to the principal.

The CHAIRMAN. Mr. Capozzi.

Mr. CAPOZZI. I applaud the national standards. I was thinking a lot about it, and if we don't have teachers who can teach to the national standards effectively, if they're not teaching to our standards now, that will be a problem.

The CHAIRMAN. Well, does that get back to just making sure we get the best and brightest into education? I was looking at, what was it Finland? Finland, where they go to their secondary schools and they find the brightest kids, kids that are really doing well, not just academically, but show leadership examples, things like that. They groom them to be teachers. They provide them with support, they send them to college, they pay their way, they make them stars. They become, sort of, the creme de la creme. And they become the teachers.

We don't do that in this country. I said, the other day—this'll be the last thing. When I was a Congressman, a House Member, a Senator—you know who I'd come across as the brightest, most goal-oriented, leader, leadership-quality-type students in our schools? Who do you think they are? They're the kids who apply to go to the military academies. I tell you, I see these kids—they're smart—you should see it. I mean, it's hard—they're all 4.0 students. But, not only that—it's not just that they do well on tests, they have to be involved in the YMCA, they have to be on the sports team, maybe even acting, maybe the school plays, they're involved in extracurricular activities, maybe with their church. They put all that together. These kids, I'm telling you, they're really

good. They're smart, they're leaders, and they're going to the Air Force Academy, Naval Academy, West Point, Merchant Marine Academy. They know they're going to get a good education. They're going to be challenged. They're going to be identified as a special kind of a person. But, I went and looked back. Of all the kids I've gotten appointed through to the academies in all my years here, somewhere around 7 or 8 out of 10 don't stay in the military. They're there for their 4 years or 5 years, or whatever their obligation is, and then they're out. And they go on to become business leaders and community leaders and everything else.

Seems to me we ought to have that kind of a system for educators, to try to get into our schools, to have the best and the brightest—like have our academies have them apply, and pay their way through school, send them to the best schools, give them the best support. You know, there's no debt when you come out of the Air Force Academy, and you've got a great education—or Naval—Air, Navy, Army—they're all great education systems. I'm just wondering if we shouldn't be thinking about that, to find these kids in high school, groom them through. I don't know, it's just an idea I have.

Yes.

Mr. HABIT. I'm just very excited about your observation. We have had a series of study visits from North Carolina to different countries, and one of those was to Singapore, to look at how they approach the building of top teachers and top leaders in their schools. It is a remarkable example of being singularly focused on quality. And, as you suggested, they go in and recruit the top 20 to 30 percent into their schools of education, and pay their tuition while they're there.

The CHAIRMAN. Where is this?

Mr. HABIT. Singapore.

The CHAIRMAN. Singapore.

Mr. HABIT. When you talk to the young people in the Singaporean colleges who are enrolled in their schools of education and colleges of education, they are very, very capable of talking about how to meet the individual needs of students.

The last observation I'll make of that is that, in Singapore, the approach to identify top candidates for principalship isn't the choice of the teacher who goes into a master's program; it's really the choice of the search for top teacher-leaders, in schools, who are observed in classrooms, and then they are invited to apply into a program to prepare them to be leaders.

What, in effect, happens is, you have the top candidates moving into teaching and the top in natural leaders among those faculties moving into the principalship. It is a beautiful model that should be studied here.

The CHAIRMAN. I just asked them to get me stuff on Singapore. Find out about that.

Mr. HABIT. We have a study we can send you—if it would be helpful to you—by one of our organizations in North Carolina, the Public School Forum of North Carolina. It's online. The report can be downloaded.

The CHAIRMAN. I'd like to find out more.

Well, our time has expired. Thank you all very much, this was really, really great.

Now, I will leave the record open for 10 days for other questions that may come in, but I also ask all of you to continue to follow our debates and deliberations on the ESEA, as we go forward, continue to give us your thoughts and suggestions.

We have set up a separate e-mail site for this. It's just *ESEA comments@help.senate.gov*. We're trying to just keep that separate, just for comments and stuff on Elementary and Secondary Education Act reauthorization.

My only closing comment here would be that someone kept mentioning AYPs. Believe me, if there's one thing I know we're going to change, it's how AYPs are judged, rather than, "How close are you getting to some unattainable goal?" "How far have you come from a base measurement?" And that's true for making sure—we're going to differentiate groups, too. One of the things I focus on are kids with disabilities and rather than seeing how far they drag them down, I want to know how far you're bringing them up. You know? When you've got 60 to 70 percent of people with disabilities unemployed, and they want to work, and they have abilities, something's wrong. That is one area to focus on, to find out how we bring them up, rather than just how far are they dragging you down.

Thank you all. You're a wonderful panel. Thank you. I appreciate it very much.

The committee will stand adjourned.

[Additional material follows.]

ADDITIONAL MATERIAL

WHAT'S EVIDENCE GOT TO DO WITH IT? AN OBSERVATIONAL STUDY OF
RESEARCH-BASED INSTRUCTIONAL BEHAVIOR IN HIGH SCHOOL CLASSES

BY JAKE CORNETT

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Submitted to the graduate degree program in Special Education and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Master's of Science in Education.

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The Thesis Committee for Jake Cornett certifies that this is the approved version of the following thesis: What's Evidence Got To Do With It? An Observational Study Of Research-Based Instructional Behavior In High School Classes

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ABSTRACT

This study examined typical instruction and management in general education classes that are co-taught by a special educator (co-taught CWC), general education classes that are taught by a special educator (adapted), and resource room instruction by a special educator. Over 3 days, 12 teachers in a middle class urban high school were observed using momentary time sampling relative to four foci: student engagement, transition time, learning arrangement, and instructional activity. On average, across the three settings students were on-task 83.9 percent of all intervals, in transition 4.4 percent of intervals, and teachers were disengaged from instruction during 23.2 percent. Whole group instruction, the least differentiated and effective mode of instruction, consumed the largest portion of observation intervals. If effective differentiated instructional practice is the sine qua non of providing students with disabilities access to general education curriculum, the data provide little evidence to suggest that appropriate instructional practice is frequently used.

CHAPTER I: INTRODUCTION AND LITERATURE REVIEW

Enacted in 1975, the Individuals with Disabilities Education Act (IDEA) requires that students with disabilities be educated in the least restrictive environment (LRE). Moreover, amendments made to IDEA during the 1997 reauthorization require that every individualized educational plan (IEP) include how the student will progress in the general education curriculum. However, disagreement about how to interpret access to "the general education curriculum" (IDEA, 1997) has dogged the disability community; especially for students whose need for support is not as great, including students with learning disabilities. Greater clarity for integrating students with disabilities into the general education curriculum came with passage of IDEA amendments during the 2004 reauthorization (Individuals with Disabilities Education Improvement Act, IDEA, 2004). As Soukup, Wehmeyer, Bashinski, and Bovaird (2007) noted, "IDEA requires that the IEPs of all students receiving special education services . . . identify specific accommodations and curriculum modifications to ensure student involvement with and progress in the general education curriculum" (p. 101).

According to the *Digest of Education Statistics*, approximately 13.4 percent of students enrolled in public schools in the U.S. receive special education services (Snyder & Dillow, 2010). Among students to be given access to the general education curriculum under the IDEA, the largest categorical group is students with a specific learning disability (LD) (Snyder & Dillow, 2010). LD is defined as,

Having a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. The term includes such conditions as perceptual dis-

abilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or environmental, cultural, or economic disadvantage (IDEA, 2004).

The meaning of “access to the general education curriculum” is not well understood, however. Central issue in the debate over the meaning of access are physical placement and who delivers content (Daniel & King, 1998). Concerns about physical placement are focused on the type of classroom where students with disabilities are educated (*e.g.*, regular, resource room, segregated, etc.). Concerns about who teaches the content are focused on questions of instructional training and certification (*e.g.*, general education teacher, special educator, paraprofessional). Although this debate has continued among scholars, special education administrators appear increasingly to favor more integrated settings for students with mild disabilities (Waldron & McLeskey, 1998; Snyder & Dillow, 2010). For example, we have seen marked decreases over the past twenty years in the amount of time students with disabilities spend outside of general classrooms (Snyder & Dillow, 2010). Whereas in 1989, 31.7 percent of students with disabilities spent 80 percent or more of the school day in general education classrooms, by 2007 the number of students doing so had grown to 56.8 percent (Snyder & Dillow, 2010). Because students with disabilities spend larger portion of the school day inside general education these classroom are more academically diverse today than at anytime in the preceding 20 years.

Unfortunately, receiving less attention in the debate on access to the general education curriculum is concern for instructional practice. That is, how curricular content is delivered and what instructional supports are provided to ensure students are benefiting from instruction. This latter concern for instructional practice should be a primary concern. This is not to question the importance of physical inclusion, but inclusive education is merely a half-victory for disability advocates if the only benefit is the reduction of social stigma. Students with disabilities should realize both academic and social benefits as a result of inclusion. This is the real meaning of gaining access to the general education curriculum. Accomplishing this requires greater focus on academic achievement and classroom instruction, especially at the high school level where student achievement appears to be stagnant.

The academic achievement of 17-year olds taking the 2008 National Assessment of Educational Progress (NAEP) in reading did not differ from 2004 or 1971 (Rampey, Dion, & Donahue, 2009). Likewise, 2008 NAEP mathematics scores for 17-year olds did not differ from 2004 and only marginal increases were observed since 1978 (Rampey, Dion, & Donahue, 2009). Wang, Haertel, and Walberg (1993) provide insight on the lack of progress in American education by distinguishing between distal and proximal variables. Distal variables, like state, district, and school level policy and demographics, are at least one step removed from the daily learning experiences of students. However, distal variables are the target of most educational innovation and attention in the U.S. As Wang et al. explain, “implementing a policy of maximized learning time, for example, does not guarantee that students in a given classroom will receive instruction from a teacher who plans lessons with special attention to eliminating poor management practices and inefficient use of time” (p. 276). Proximal variables like curriculum, instruction, and assessment that directly impact teaching and learning have a more immediate and direct influence on student achievement (Wang et al., 1993). These proximal variables are the epicenter of the instructional core of education. The stagnation of high school NAEP scores, some suggest, is due, at least in part, to a lack of focus on the instructional core of education (City, Elmore, Fiarman, & Teitel, 2009).

According to City et al. (2009), “in its simplest terms, the instructional core is composed of the teacher and the student in the presence of content” (p. 22). Outside the instructional core are the student’s home life; school governance, financing, and administration; and peer effects. Using hierarchical linear modeling to estimate variance in student achievement in New Zealand, Hattie (2003) found that teachers account for approximately 30 percent of the total variance in achievement while the students account for approximately 50 percent and their home life, school, and peers account for 15 to 30 percent. What teachers know and how they instruct are powerful predictors of student achievement. Beyond what students arrive prepared to do, teacher effects are the largest single contributor to student achievement.

The importance of the instructional core is central to student learning because teaching is the moderation of learning between a knowledgeable source (*e.g.*, teachers, books, etc.) and a novice learner (*i.e.*, student). In essence, learning itself is encapsulated within the instructional core. As such, there are three ways to manipulate the teaching and learning enterprise: (a) change the content to be learned, (b) change the student, or (c) change teaching. In the U.S., control over content is decentralized such that state and local education agencies determine what will be

taught in public schools. Likewise, it appears untenable to change the student. Although much can be done to improve the school readiness of academically disadvantaged and at-risk students, social and cultural politics are a formidable barrier to doing much more in this regard. Therefore, educational improvement must be driven by the third component of the instructional core, the teacher. How teachers manipulate content to make it more accessible and thereby mediate content for the student, largely determines academic success (Hattie, 1999; Sanders & Rivers, 1996).

Teachers impact student academic success by the control they exercise over a series of closely coordinated instructional activities and management strategies. Combining these in such a way that meaningful access to the general curriculum is achieved for all students, regardless of current skill, requires careful consideration of four separate yet interrelated categories of instruction and management foci: student engagement, transition time, learning arrangement of students, and instructional activity. In order to meet the needs of all learners, high school teachers must effectively use the instructional period, keep students engaged, create opportunities for individualized learning, and match instructional activities to the skill level of students. Given the importance of these four foci to the teaching and learning enterprise, and their centrality to this study, they warrant closer examination.

Student Engagement

Research on classroom management indicates a variety of instructional activities and classroom management techniques can reduce the likelihood of student problem behavior and enhance student achievement (Doyle, 1986). McNamara and Jolly (1990a; 1990b) investigated ways to increase on-task behavior while reducing off-task and disruptive behaviors of 12 and 13-year old students, they concluded that, "when disruptive behavior is dealt with by the promotion of on-task behaviors then all types of off-task behavior, from innocuous to grossly disruptive, are reduced" (1990b, p. 248). When off-task and disruptive behavior are reduced, the opportunity for student learning increases. Doyle (1986) made clear the link between the learning arrangement of the students and engagement when summarizing the research of several leading scholars (Gump, 1967; Kounin, 1970; Rosinshine, 1980). In general, Doyle concluded that student engagement was highest in teacher led small groups and lowest in unsupervised seatwork.

Transitioning Between Activities

While students transition between places, activities, phases of a lesson, or lessons there is great opportunity for wasted time and off-task behavior; moreover, there is little opportunity for student learning. Transition periods are lost instructional time that teachers should endeavor to reduce. Research in elementary classrooms has found that approximately 31 transitions occur daily accounting for about 15 percent of classroom time (Burns, 1984; Gump, 1967). In high school classrooms, much less is known about the frequency or duration of transitions. However, it is commonly assumed that because the seating structure or "room arrangements in secondary classes typically remain the same across activities, major transitions take less time" (Doyle, 1986, p. 406). Also, whereas the instructional period in elementary schools is typically 6-hours, in high schools each period is 45 to 90 minutes; when the instructional period is shorter there should be fewer discrete tasks and less need for multiple transitions during a single instructional period. Therefore, transitions in high school classrooms should take less time (Doyle, 1986) and be fewer in number.

Learning Arrangement

Although whole or large group instruction is most prevalent in high schools, it is not regarded as an appropriate learning arrangement for extended periods of time in academically diverse classrooms (Hughes & Archer, in press). During whole group instruction, the teacher gears the lesson to the average ability of the students in the classroom, assuming to thereby meet the educational need of the greatest number of students (Ornstein, 1995). This type of instruction is thought to be an economical and convenient format of teaching large quantities of new information, especially to large class sizes. However, students within high school classrooms have diverse academic needs, and whole group instruction only meets the needs of the few students whose ability is at the middle of the group average.

Small group learning allows students to excise different skills not used in whole or large group instruction. Cohen (1994) found that students who worked well together in small groups were better able to manage competition and conflict among team members, listen to and combine different points of view, construct meaning,

and provide support to one another. The most common means of creating small groups is within-class ability grouping, also referred to as skill grouping.¹

Chorzempa and Graham (2006) surveyed a random sample of primary teachers from across the U.S. and found that 63% of the respondents used ability grouping in their classroom. Research suggests that two or three homogeneous ability groups within one classroom is better than a larger number of very small groups because it permits frequent and extended monitoring and feedback by the teacher, reduces transition times, and limits time spent on individual seatwork (Hiebert, 1983; Webb & Farivar, 1994). Moreover, students in each skill group should be carefully and frequently monitored such that regrouping is common. When heterogeneous classes are split into small homogeneous learning groups then students academically benefit, especially struggling students, in the content areas of reading and mathematics (Gamoran, 1992; Oakes, 1987; Slavin, 1989).

Instructional Activity

Rosenshine and Stevens (1986) synthesized the work of several leading scholars (Gagné, 1970; Good & Grouws, 1979; Hunter & Russell, 1981) on effective teaching practice to create a list of six “fundamental instructional ‘functions’” (p. 379). These functions are,

1. review, check previous day’s work (and reteach, if necessary)
2. present new content/skill
3. guided student practice (and check for understanding)
4. feedback and correctives (and reteach, if necessary)
5. independent student practice
6. weekly and monthly reviews (Rosenshine & Stevens, 1986, p. 379).

Across these six functions are six instructional practices. These practices are presenting new information, describing new skills, monitoring, providing feedback, reteaching, and scaffolding supports toward student mastery. Within each of these six practices are several instructional activities that are used by teachers; instructional activity is one of the foci of this study. Assessing student knowledge is an instructional activity associated with Rosenshine and Stevens’ (1986) first and sixth functions. Assessing student knowledge and checking for understanding is an important instructional activity to monitor mastery of new skills, identify struggling students, and pinpoint what learning process was not mastered during initial teaching. Broadly, there are two types of assessments: formative and summative. Formative assessments are not for credit but rather are intended to inform future instruction by rapidly identifying current level of mastery and specific skills that a student did not grasp. Formative assessments are also referred to as progress monitoring assessment. Summative assessments include tests and quizzes intended to measure knowledge and assign credit based on that measurement. Both formative and summative, can be used to inform future instruction, provide feedback to students, and identify skills that need to be re-taught. Assessments of learning are key to effective instructional practice.

Reviews should be guided by results from formal assessments. Often, reviewing past content is used as an activity to re-teach and monitor student knowledge (Hughes & Archer, in press). Reviewing can focus on fact or concept recall, ability to manipulate or generalize previous learning to novel situations, or processes for learning that include broad skills (e.g., summarizing) or strategies (e.g., comparing concepts or writing paragraphs). Research indicates that reviewing and summarizing the key information from a lesson is associated with increased student achievement (Armento, 1976; Wright & Nuthall, 1970). Moreover, review activities can be used to re-teach content that was not mastered during initial teaching and learning. Reviewing past content is an opportunity to provide feedback to students and assess current knowledge.

Four instructional activities used when initially presenting new information or skills are lecturing, describing, giving directions, and modeling. These instructional activities are associated with Rosenshine and Stevens’ (1986) second function. These four activities are all led by the teacher and are typically characterized by the teach-

¹ The term “ability grouping” implies that current assessment and group assignment is intrinsic, immutable, and a permanent reflection on the individual’s potential to learn. The term “skill grouping,” however, suggests that current ability bear no reflection on the individual’s intelligence or ability to learn. Therefore, skill grouping should be considered the preferable term such that grouping is not implied to be a reflection on an individual’s potential for academic success or ability to learn. Further, skill grouping should not be a semester-long assignment for the student. Instead, for a struggling student, skill grouping should be used to remediate the skill rapidly then shift the student out of the lowest skill group. Although skill grouping is the preferable term the researcher’s term will be used here.

er talking to the class. Lecturing is thought to be an efficient way to present large blocks of information to students. When teachers lecture, students are typically instructed to take copious notes as the main method of learning the content. However, although commonly used, this is a passive learning process that may lead to disengagement and confusion on behalf of the student. Rarely is extended periods of lecture preferable to other instructional activities.

Monitoring students is an instructional practice associated with Rosenshine and Stevens' (1986) third function. Teachers monitor students using a variety of instructional activities including multiple types of questioning, physically observing student work, and listening to students' academic talk while working in small groups. Effective teachers use these monitoring activities to assess student understanding of new content, provide correction or feedback, reteach, and adjust future instruction (Hughes & Archer, in press; Rosenshine & Stevens, 1986). Research has shown that when teachers circulate the classroom to physically observe student performance student engagement increases (Fisher et al., 1978), academic achievement may be bolstered (Evertson, Anderson, & Brophy, 1978), the pace of the lesson is maintained (Doyle, 1984; Evertson & Emmer, 1982), and a clear message is sent to the student that the teacher is available to help.

Giving feedback is an instructional practice associated with Rosenshine and Stevens' (1986) fourth function. In his meta-analysis of more than 180,000 studies, encompassing 450,000 effect sizes, on the effects of instruction on student achievement, Hattie (1999) found that "the most powerful single moderator that enhances achievement is feedback" (p. 9). According to Hattie, feedback is providing information about how and why a student understands, and next steps the student should take to continue toward mastery. There are multiple instructional activities associated with feedback. Hattie and Timperley (2007) examined other types of feedback and found them to be powerful moderators of student achievement also, but not all types were equally powerful. Notably, reinforcing student success, giving corrective feedback, and remediating feedback were shown to positively impact student achievement with average effect sizes of 1.13, 0.94, and 0.65, respectively (Hattie, 1999).

Missing from the list of six instructional functions and practices synthesized by Rosenshine and Stevens (1986) is modeling and graphic organizers. Although they do include modeling "the skill or process (when appropriate)" as one element of presenting new skills or processes (p. 381), they fail to emphasize the importance of modeling at various stages of learning and to differentiate between explicit and implicit modeling as separate instructional activities. As an instructional activity, explicit modeling has two components—physical demonstration of the steps or procedure and verbalizing the meta-cognitive thought process used to guide actions. Implicit modeling is teacher demonstration of the steps or procedures without verbalizing the meta-cognitive process. Research indicates that students with disabilities may not use self-talk to guide performance on academic tasks (Warner, Schumaker, Alley, & Deshler, 1989). Therefore, educators need to teach both the procedural steps of completing a task and the meta-cognitive process that guides self-talk and leads to successful completion. In other words, they need to both present and make explicit the thought process used by skilled learners. Such explicit modeling is key to the academic success of students, especially those who struggle with information processing, and those with LD (Gildroy, 2001). Given the diverse levels of academic skill found in most high school classrooms, explicit modeling is almost always appropriate as an instructional activity when presenting new skills or processes.

Graphic organizers are a visual representation of ideas or concepts intended to show relationships and demonstrate the organization of concepts (e.g., hierarchical lists, flowcharts, outlines, concept maps). Graphic organizers are used for many purposes, including as reading enhancement (DiCecco & Gleason, 2002; Dunston, 1992; Griffin & Tulbert, 1995; Robinson, 1998; Vekiri, 2002), a mathematical problem-solving tool (Ives & Hoy, 2003), note taking strategy (Katayama & Crooks, 2003; Katayama & Robinson, 2000), and an accommodation for students with disabilities (Boudah, Lenz, Bulgren, Schumaker, & Deshler, 2000; DiCecco & Gleason, 2002; Horton, Lovitt, & Bergerud, 1990; Kim, Vaughn, Wanzek, & Wei, 2004). Evidence suggests that graphic organizers aid in comprehension by providing students a method to organize new information and understand the interconnections between newly learned and recently learned knowledge (Alvermann, 1981; Robinson & Kiewra, 1995). Stone's (1983) meta-analysis of the effects of graphic organizers presented in advance of the lesson found that long-term learning was on average .66 standard deviations better. Furthermore, when an organizer is provided at the beginning of the lesson it can help students with disabilities retain more of the information presented (Lenz, Alley, & Schumaker, 1987).

Purpose of Study

There is little known about differences in classroom instruction and management among general education classes that are co-taught by a special educator (co-taught CWC), general education classes that are taught by a special educator (adapted), and resource room instruction by a special educator (resource room). Given the literature on effective instructional practices and activities, the purpose of this study was to systematically catalogue how teachers instruct students in these settings by observing how they manage and use the instructional period relative to four foci: student engagement, learning arrangement, transition time, and instructional activity. The goal of this study was to understand typical and routine instruction and management in high school classrooms that promote access to the general curriculum for students with disabilities.

CHAPTER II—METHODOLOGY

Setting and Participants

Teachers in one public high school serving grades nine through twelve participated in this study. Within the school district this high school has a reputation for high academic achievement. The high school is located in a large urban city in the Midwestern United States with an approximate population of 350,000. The student population served by this high school is best characterized as middle class with 31.9 percent of the students eligible for free or reduced meals (NCES, 2009). Among the students who attend the high school, 3.0 percent are American Indian or Alaskan Native, 3.8 percent are Asian or Pacific Islander, 10.3 percent are Hispanic, 14.7 percent are African-American, and 68.2 percent are Caucasian (NCES, 2009). All teachers observed had at least 5 years of teaching experience and were certified in the area observed.

Three types of instructional settings were observed: adapted classrooms, co-taught class-within-a-classroom (CWC), and resource rooms. Adapted classes use the same curriculum as regular education classes; however, the instructor is a certified special educator and all students enrolled in the class are qualified for special education services. McCall and Skrtic (in press) have referred to these classes as “special regular classrooms.” The number of students in these adapted classrooms is slightly fewer than in general education classrooms; this is intended to allow the special educator opportunity for more individualized instruction and greater student participation. Students in these adapted classrooms receive credit that applies toward earning a regular diploma.

CWC classrooms are co-taught by a general education teacher and a certified special educator (Hudson, 1990; Schulte, Osborne, & McKinney, 1990). In these classes, the general educator was primarily responsible for teaching the content with the special educator acting in a support capacity. The special educator would circulate the room providing assistance to individual students and would occasionally engage in whole group teaching to augment the general educator’s instruction. Resource classrooms are taught by a certified special education teacher; all students enrolled in the class are qualified for special education services (Wiederholdt, 1974). Resource classrooms do not follow the general education curriculum but rather are intended to support individual student needs or small homogeneous groups of students. The number of students in these resource classrooms is very few, ranging from two to six at any given time. Special educators in these classrooms are expected to augment prior general education instruction received in content areas by tutoring students, pre-, and/or re-teaching information, and working on other skills as needed (e.g., organizational strategies for assignments, note taking, learning strategies).

Measurement Instrument

There is little known about differences in classroom instruction and management among co-taught CWC, adapted, and resource room settings. Given the literature on effective instructional practices and activities, the purpose of this study was to systematically catalogue how teachers instruct students in these settings by observing how they manage and use the instructional period relative to the four foci. The goal of this study was to understand typical and routine instruction and management in high school classrooms that promote access to the general curriculum for students with disabilities.

There were four foci of the observation instrument. The first concern was to determine the level of student engagement. Student engagement is the amount of time students are on-task and involved in the assigned instructional activity. The second focus was to determine what portion of each class period was spent in major transitions. Major transitions are those transitions that occur while the class moves be-

tween places, activities, phases of a lesson, or lessons. The third focus was to determine the learning arrangement of the classroom. Several types of learning arrangements are possible, ranging from whole group instruction to independent work being completed by one student. The fourth focus was to determine the proportion of engaged time spent in each of 30 types of instructional activity appropriate for high school identified on the observational instrument. See Appendix B for the observation instrument.

To develop the teacher observation instrument, a comprehensive literature search was conducted to identify empirical and prescriptive literature regarding instructional practice appropriate for secondary classrooms. Beginning with ERIC, PsycINFO, and Dissertation Abstract International online databases, the following keyword search terms were used: instructional practice, instructional method, teaching method, classroom instruction, and inclusion teaching. From this corpus of literature, seminal articles were identified and used for ancestral searches. Further, the three most recent editions of the *Handbook of Research on Teaching* was carefully examined (Gage, 1965; Richardson, 2001; Wittrock, 1986).

Culled from this literature base were 142 instructional and management activities. For each activity, a brief definition was written based upon the literature and printed onto 3-inch by 5-inch index cards. These index cards were then sorted into categories such that similar instructional and management activities were grouped together. After initial sorting was complete, some categories were combined due to their extreme similarity. Then, a description and operational definition was written for each instructional and management activity. These categories were presented to an expert panel with extensive background in conducting intervention research and teaching in inclusive settings. The panel had nine members, five of the nine hold doctorates in education or developmental psychology while the remaining four each have 15 or more years experience teaching students with disabilities in inclusive high schools. The panel was asked to (a) identify any missing instructional activities, (b) provide references for those activities, (c) critique the description and operational definition of the activities, and (d) offer advice on the organization, categorization, or elimination of the categories of activities.

Based upon the literature and this expert advice, the following categories and subcategories of activities were identified. Presented below is a brief description for each category; the operational definitions used as decision criteria by both observers when using the observation instrument can be found in Appendix A.

Student On-Task. Student on-task was a dichotomous category; either the student was on- or off-task during the observation interval. On-task was recorded when the students were engaged in an instructional activity. Off-task was recorded when the students were not engaged, misbehaving, or out of the room.

Learning Arrangement. Learning arrangement consisted of six subcategories. The subcategories were whole group instruction, large group instruction, small group instruction, individual teacher led instruction, student peer pairs, and individual-independent work.

Transition Time. Transition time was a dichotomous category; either occurring or not during the observation interval. Transition time was recorded when the students were shifting between classroom activities.

Instructional Activity. Instructional activity consisted of 30 subcategories of activities and a not-engaged observational option. The subcategories of instructional activity were lecture, describe, two types of modeling, two types of giving directions, six types of monitoring, three types of reviews, two types of feedback, three types of graphic organizers, six reading activities, three types of formal assessment, and video. An additional not engaged time category was used to capture off-task teacher behavior during respective instructional activities.

Procedures

Two independent observers conducted the observations over a three-day time period; one served as the primary data collector and the second as the inter-observer agreement data collector. Both observers were trained on data collection procedures of momentary time sampling (MTS). First, both observers read and discussed the operational definition for each category of time-on-task, learning arrangement, transition time, and instructional activity. Second, both observers practiced data collection using the observation form in two classrooms in an urban public high school. Third, observers practiced recording the data using publicly available video recordings of students not involved in this study. Once the two observers were in 90 percent agreement in each of the four foci, data collection was scheduled.

Data collection was conducted in real-time using MTS beginning when the teacher began instruction and ending when the teacher stopped instruction. Partial interval recording (PIR) and MTS are two commonly used time sampling methods in edu-

cational observation research. Both methods divide large blocks of time (e.g., a class period) into a number of small segments (e.g., 30 seconds). The small segment becomes the time sampling interval whereby behavior occurrence or nonoccurrence is coded based upon the pre-determined decision criteria described previously. Data is collected during each interval in each of the four foci.

PIR and MTS differ by virtue of when the behavior is observed and coded and what decision rule is used to guide this. When PIR is used, the observer records the behavior if it occurs at least once during the interval period. In other words, the observer behaves like a video recorder, capturing behavior during the entire sampling interval (e.g., 30 seconds). If the behavior is observed at all, the behavior is recorded. However, when MTS is used, the observer records the behavior that occurs the moment the sampling interval begins. In other words, the observer behaves like a still camera, capturing behavior at the beginning of the sampling interval. The first behavior observed is the only behavior recorded. Neither PIR nor MTS are concerned with frequency or duration of individual behavior within each interval; only one behavior is recorded each sampling interval.

In this study, MTS was used to estimate percentage of time (a) on-task, (b) spent in each learning arrangement, (c) lost in transitions between instructional activities, and (d) used for each instructional activity. Each of these four foci were recorded every 30-second observation interval. The research comparing PIR and MTS has determined that PIR overestimates time percentage of behavior whereas MTS gives a reasonably accurate estimate of behavior when brief intervals (30 seconds or less) are used (Gardenier, MacDonald, & Green, 2004; Murphy & Goodall, 1980; Powell, Martindale, Kulp, Martindale, & Bauman, 1977; Tyler, 1979).

The two observers arrived prior to the start of class and occupied seats in the rear of the classroom where they would not interfere with instruction but could see every student. Each observer sat with a data collection sheet and a clipboard in their lap, and a pen in hand. A digital 30-second repeating countdown clock was positioned near the two observers. When the teacher began class (e.g., asking students to sit or beginning to instruct) the clock was started. Once the clock reached zero, the two observers looked at the teacher and designated student, then recorded whether the student met the criteria for on-task behavior, what the learning arrangement of the class was, if the transition criteria was met, and what instructional activity was used by the teacher. The repeating countdown clock automatically reset to 30 after each interval and began counting down again. After recording the behavior, the observers watched the clock until it reached zero again, this process was repeated in each classroom until the instructor ended the class period.

When rating student time on-task, both observers began with the student in the front-left seat of the class, then worked their way across the first row of students, and then began the second row continuing until every student had been observed and rated on the observation sheet. Only one student was scored during each time interval. Once all students had been scored, the observers began again at the beginning front-left seat and would repeat this until the class ended. Both observers took care to ensure they were observing and rating the same student during each time interval. See Appendix B for the observation instrument sheet.

Inter-Observer Reliability

To determine inter-observer agreement, the two data collectors independently observed and scored 98.7 percent of the time sample intervals. Inter-observer percent reliability agreement was calculated using the following formula: Percent Reliability = (Number of Agreements / Number of Agreements + Disagreements) X 100. Inter-observer agreement across all intervals was 95.6 percent reliability. When both observers did not agree, the data was removed from analysis such that all results presented below represent 100 percent agreement between the two observers.

CHAPTER III—RESULTS

Results will be presented beginning with student on-task behavior and major transitions then continue with results from the learning arrangement and instructional activity. In each of the three sections that follow, data from all classrooms in all settings is summarized first; then results from each of the three types of settings are presented. A one-way between subjects ANOVA was calculated to compare the observation data collected in the three instructional settings for percentage of time intervals that students were on-task. A second one-way between subjects ANOVA was calculated to compare the observation data collected in the three instructional settings for percentage of time intervals that major transitions occurred. However, no statistical test of mean difference was used for learning arrangement

or instructional activity due to inadequate power. Instead, these comparisons are presented descriptively.

On-Task Behavior and Major Transitions

Observations across all classrooms and settings indicated that on average students were on-task 83.9 percent of all intervals. A one-way between-subjects ANOVA indicated there was no significant difference in percent of time on-task between the three instructional settings, $F(2, 87) = 2.79$, $p > .05$. See Table 1 for the mean percentage and standard deviation of on-task intervals in each type of setting (i.e., adapted, co-taught CWC, and resource room).

In all settings, observations suggest that very little time was lost in major transitions during the class period. Transition time accounted for 4.4 percent of all intervals, which is markedly less time than Burns' (1984) and Gump's (1967) 15 percent of classroom time. Further, a one-way between-subjects ANOVA indicated that there was no significant difference in major transition time between the three instructional settings, $F(2, 87) = 1.41$, $p > .05$. See Table 1 for the mean percentage and standard deviations of major transition intervals in each type of setting (i.e., adapted, co-taught CWC, and resource room).

Table 1
Mean percentage of intervals of student time on-task and major transitions for adapted, co-taught CWC, and resource room settings

Observation Code	Adapted (N = 4 Classes) Mean(SD)	Co-Taught CWC (N = 5 Classes) Mean (SD)	Resource Room (N = 3 Classes) Mean(SD)
On-Task	82.2(16.2)	81.6 (12.6)	89.9(11.9)
Transition	6.0(18.6)	5.4 (9.4)	0.5(1.5)

Learning Arrangement

Table 2 shows the mean percentage of intervals in which teachers in all classrooms and settings arranged the students in the six formats. Students in these classes spent the largest portion of observation intervals in whole group instruction (47.2) and the second largest in independent work (33.3). During observations, teachers did not instruct students to work with one peer in any classroom. Teachers spent less than 10 percent of time intervals in each of the remaining instructional arrangement with 1.1 percent of intervals in small group learning.

Table 2
Mean percentage of intervals, standard deviation, and rank of each learning arrangement across all classrooms

Learning Arrangement	Mean Percentage	SD	Rank
Whole Group	47.2	44.7	1
Independent	33.3	41.1	2
Large Group	9.6	28.1	3
Teacher Led 1-1	8.9	24.6	4
Small Group	1.1	10.5	5
Peer Pairs	0.0	0.0	6

Table 3 shows the mean percentage of intervals in which teachers in each classroom setting arranged learning. In each of the three settings, whole group instruction consumed the largest portion of observation intervals. The percentage of intervals teachers used whole group instruction in adapted, co-taught CWC, and resource rooms is 37.5, 51.0, and 55.5, respectively. Small group instruction occurred only in adapted classrooms, and infrequently in that setting. Teacher led one-on-one instruction occurred during 28.8 percent of the intervals in the resource room setting whereas 4.7 percent in the co-taught CWC classrooms and not at all in adapted classrooms.

Table 3

Mean percentage of intervals in each learning arrangement for adapted, co-taught CWC, and resource room settings

Learning Arrangement	Adapted (N = 4 Classes) Mean(SD)	Co-Taught CWC (N = 5 Classes) Mean(SD)	Resource Room (N = 3 Classes) Mean(SD)
Whole Group	37.5(45.5)	51.0 (42.9)	55.5 (45.6)
Independent	36.3(45.7)	41.4 (42.3)	15.7 (25.0)
Large Group	23.2(41.2)	2.9 (13.2)	0.0 (0.0)
Teacher Led 1-1	0.0(0.0)	4.7 (18.3)	28.8 (38.2)
Small Group	3.0(17.4)	0.0 (0.0)	0.0 (0.0)
Peer Pairs	0.0(0.0)	0.0 (0.0)	0.0 (0.0)

Instructional Activity

The mean percentage of intervals in which teachers in all settings engaged in instruction was 76.8 whereas the mean percentage not engaged in instruction is 23.2. Figure 1 shows the mean percentage of intervals in which teachers in all settings engaged in each of the 30 instructional activities or did not engage in any instructional activity. The bars in Figure 1 are arranged from largest percentage of intervals to smallest percentage of intervals.

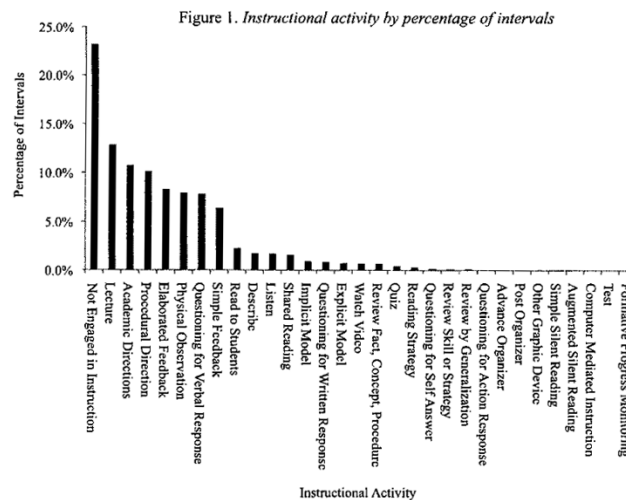


Table 4 shows that in general teachers were not engaged in instruction for more intervals than any of the 30 instructional activities. Instructional activities in which teachers spent more than ten percent of time were lecturing, giving academic direction, and giving procedural directions. Teachers engaged in elaborated feedback, physical observation of students, asking questions for student verbal response, and simple feedback five to ten percent of time intervals. Few, if any, intervals were spent using instructional activities that research indicates are appropriate for diverse academic learners (e.g., using advance organizers, explicit modeling, monitoring progress with formative assessment).

Table 4

Mean percentage of intervals, standard deviation, and rank of each instructional activity across all classrooms

Instructional Activity	Mean Percentage	SD	Rank
Lecture	12.8	21.4	2
Describe	1.8	4.0	10
Implicit Model	0.9	4.9	13
Explicit Model	0.7	3.1	15
Academic Directions	10.8	11.9	3
Procedural Direction	10.2	12.1	4
Physical Observation	7.9	15.8	6
Questioning for Self Answer	0.2	1.1	20
Questioning for Verbal Response	7.8	12.9	7
Questioning for Written Response	0.8	5.9	14
Questioning for Action Response	0.1	0.6	23
Listen	1.7	4.7	11
Review Fact, Concept, Procedure	0.7	2.1	17
Review by Generalization	0.1	0.8	22
Review Skill or Strategy	0.1	0.8	21
Simple Feedback	6.4	10.5	8
Elaborated Feedback	8.3	14.5	5
Advance Organizer	0.0	0.0	24
Post Organizer	0.0	0.0	24
Other Graphic Device	0.0	0.0	24
Read to Students	2.3	9.6	9
Shared Reading	1.6	7.8	12
Simple Silent Reading	0.0	0.0	24
Augmented Silent Reading	0.0	0.0	24
Reading Strategy	0.3	2.9	19
Computer Mediated Instruction	0.0	0.0	24
Test	0.0	0.0	24
Quiz	0.4	4.1	18
Formative Progress Monitoring	0.0	0.0	24
Watch Video	0.7	5.2	16
Not Engaged in Instruction	23.2	26.8	1

Table 5 display similar data to those reported above except they are organized according to the type of instructional setting. As a group, teachers in the adapted setting are on average involved in instructional activities 71.6 percent of time intervals and not engaged in instruction 28.4 percent of time intervals. While engaged, these teachers used four types of instructional activities most frequently (i.e., procedural direction, physical observation, questioning for verbal response, and simple feedback). These four instructional practices accounted for 41.6 percent of all time intervals in adapted classrooms. Modeling of any kind was not observed in any adapted classroom nor was use of graphic devices of any kind, silent reading of any kind, computer-mediated reading instruction, formative assessments, or tests.

As a group, teachers in the co-taught CWC setting are on average involved in instructional activities 76.6 percent of time intervals and not engaged in instruction 23.4 percent of time intervals. Figure 2 shows that only five instructional activities account for nearly three quarters of the time intervals that teachers in this setting were engaged in instructional activities. The five activities are elaborated feedback, procedural directions, academic directions, physical observation, and lecture. Several instructional activities were never observed (see Table 5).

Table 5

Mean percentage of intervals of each instructional activity for adapted, co-taught CWC, and resource room settings

Instructional Activity	Adapted (N = 4 Classes) Mean(SD)	Co-Taught CWC (N = 5 Classes) Mean(SD)	Resource Room (N = 3 Classes) Mean(SD)
Lecture	2.5(6.4)	7.2 11.1	30.5(29.9)
Describe	0.7(1.9)	0.9(2.5)	4.8(6.4)
Implicit Model	0.0(0.0)	2.8(9.5)	0.7(2.5)
Explicit Model	0.0(0.0)	0.2(1.1)	2.8(5.8)
Academic Direction	7.3(9.0)	11.3(13.3)	12.3(11.8)

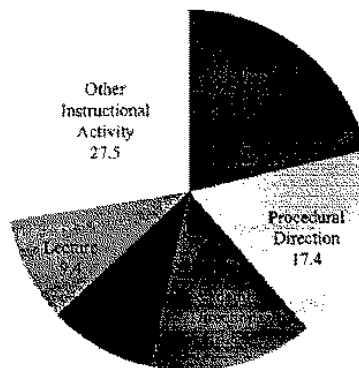
Table 5—Continued

Mean percentage of intervals of each instructional activity for adapted, co-taught CWC, and resource room settings

Instructional Activity	Adapted (N = 4 Classes) Mean(SD)	Co-Taught CWC (N = 5 Classes) Mean(SD)	Resource Room (N = 3 Classes) Mean(SD)
Procedural Direction	10.4(11.1)	13.3(16.1)	4.8(7.0)
Physical Observation	10.4(21.9)	7.3(8.0)	3.2(10.8)
Question for Self-Answer	0.0(0.0)	0.0(0.0)	0.6(2.1)
Question for Verbal Answer	10.4(16.7)	3.4(6.1)	10.8(13.2)
Question for Written Answer	2.3(9.7)	0.0(0.0)	0.0(0.0)
Question for Action Response	0.0(0.0)	0.3(1.3)	0.0(0.0)
Listen	0.8(2.2)	1.9(5.0)	2.1(3.8)
Review Fact, Concept, Procedure	1.0(2.4)	0.0(0.0)	1.0(2.8)
Review by Generalization	0.3(1.3)	0.0(0.0)	0.0(0.0)
Review Skill or Strategy	0.3(1.3)	0.0(0.0)	0.0(0.0)
Simple Feedback	10.4(15.1)	4.1(5.9)	4.1(5.9)
Elaborated Feedback	5.0(9.3)	16.4(23.4)	6.4(9.1)
Read to Students	6.3(15.1)	0.0(0.0)	0.0(0.0)
Shared Reading	2.7(7.9)	2.7(12.5)	0.0(0.0)
Reading Strategy	0.8(4.8)	0.0(0.0)	0.0(0.0)
Quiz	0.0(0.0)	1.8(8.3)	0.0(0.0)
Watch Video	0.0(0.0)	2.9(10.5)	0.0(0.0)
Not Engaged in Instruction	28.4(34.6)	23.4(24.5)	15.8(16.9)

Note: Among the types of learning arrangements, no class used student peer pairs. Likewise, among the list of instructional activities no teacher used graphic devices of any kind, silent reading of any kind, computer mediated reading instruction, formative assessments, or tests. Therefore, means and standard deviations are not reported for these variables.

Figure 2. Percentage of time intervals while engaged in instruction across all co-taught CWC classrooms



As a group, teachers in the resource classroom setting were on average involved in instructional activities 84.2 percent of time intervals and not engaged in instruction 15.8 percent of time intervals. This is the largest percent of time intervals engaged in instruction among the three settings. However, in resource classrooms much of the instructional time was used to lecture. Only a few time intervals were spent reviewing in resource classrooms. Further, reading instruction of any kind was not observed in any resource classroom nor was use of graphic devices of any kind or assessments of any type.

Great variability among the classes was indicated by the large standard deviations, particularly in percentage of time intervals that teachers were not engaged in instruction and the percent of time intervals that whole group and independent learning arrangements were used. These results have limited generalization to adapted, co-taught CWC, and resource room settings in other schools.

CHAPTER IV—DISCUSSION

There is little known about differences in classroom instruction and management among co-taught CWC, adapted, and resource room settings. Given the literature on effective instructional practices and activities, the purpose of this study was to systematically catalogue how teachers instruct students in these settings by observing how they manage and use the instructional period relative to four foci. The goal of this study was to understand typical and routine instruction and management in

high school classrooms that promote access to the general curriculum for students with disabilities.

These three settings are common in large high schools that attempt to provide meaningful access for students with disabilities to the general education curriculum. Observations in four focused areas were used to create a profile of instruction in each of these settings. The four foci were student engagement, major transition time, learning arrangement of the students, and instructional activity. Learning arrangement was split into six subtypes spanning from whole group instruction to independent learning. Likewise, instructional activity was split into 30 separate instructional practices plus not engaged time.

Conclusions and Implications

Four major findings emerged from this study. First, disengaged from instructional activity was the most frequently observed behavior. Second, instructional activities that occurred frequently (e.g., giving academic or procedural direction and lecturing) are not associated with student academic outcomes in the empirical or prescriptive literature. Third, practices that have been shown to increase learning (e.g., feedback, graphic organizers, modeling) were observed sporadically. Fourth, students spent the class period engaged primarily in whole group or independent learning arrangements.

When examining the proportion of time teachers were engaged and not engaged in instruction the results show that a large amount of instructional time is not utilized. In the adapted and co-taught CWC settings, this was the largest percentage of time, and second largest in resource classrooms. However, in the resource setting teachers were engaged in instruction during more intervals than were teachers in the adapted or co-taught CWC settings, 12.6 and 7.6 percent respectively. On average, teachers were not engaged during 23.2 percent of observation intervals; in a 90-minute class period this represents 20.9 minutes per school day per class period, or nearly 1.75 hours per school week per class. Typically, teachers were checking, writing, or reading emails at a computer in the classroom or preparing to teach the lesson for the next class period. Although these are necessary tasks that teachers must complete, it is inappropriate to be completing those tasks during instructional time. This is cause for great concern because if approximately one-quarter of all instructional time is used by teachers to check their email, there is a reduction in the potential for learning.

Across the three settings, lecturing, giving academic direction, and giving procedural direction were the second, third, and fourth most frequently observed instructional practices, respectively. In other words, when teachers are engaged in instruction, they were found to be spending a large portion of the class period talking; that is, of the time teachers are engaged in instruction, the teacher is talking 44 percent of the time. These instructional activities, although common in most high schools, are not regarded as appropriate practice when teaching new content or skill (Hughes & Archer, in press), and rarely are these instructional activities preferable, especially for students with disabilities (Deshler, Ellis, & Lenz, 1996; Hughes & Archer, in press; Swanson & Deshler, 2003).

More effective teaching practices such as explicit modeling, frequently reviewing, using graphic organizers, giving formative assessment, and small group instruction occurred infrequently across the three settings. These instructional practices have been shown to impact student academic achievement (Armento, 1976; Gildroy, 2001; Hattie, 2003; Hattie & Timperley, 2007; Lenz, Alley, & Schumaker, 1987; Stone, 1983) and should be used more frequently during instruction. Across the three settings, students were arranged as a whole group for nearly half of the observation periods. Teachers in the resource room setting used the whole group learning arrangement 18 percent more than teachers in the adapted setting and 4.5 percent more than teachers in the co-taught setting. However, research has shown that regardless of the size of class, whole group learning is less effective than one-to-one tutoring or small group learning (Ornstein, 1995; Slavin, 1989). On average students were instructed to work independently during 36.3 percent of time intervals in adapted classrooms, 41.1 percent in co-taught CWC classrooms, and 15.7 percent in resource rooms. Moreover, across the three settings, students were instructed to work independently on a task during one third of the observation periods. Although independent work is important for progressing toward and displaying mastery learning, it appears to be used as an activity to occupy students so that the teacher can engage in non-instructional behavior (e.g., checking email, grading papers). Rarely is it appropriate for students to spend 30 minutes during a 90-minute class period working independently on a task, especially given that on average teachers in this study were disengaged from the learning process for 21 minutes during a 90-minute class. These disappointing results may be related to the increasing con-

tent demand of curriculum and the prevalence of pacing guides that require large quantities of information be covered in relatively short time. Teachers may feel the only conceivable way to teach the prodigious required content is by using less effective but more efficient instructional activities (e.g., lecture, video, describing). In effect, curricular demands and standards based accountability may result in a race to the bottom with regard to instructional activities. In essence, sacrificing differentiated instruction and scaffolds of support for curriculum content.

When taken together, the four major findings from this study raise serious questions about meaningful access to the general education curriculum for students with disabilities. The results indicate that physical inclusion in the general education classroom does not guarantee access to the general curriculum as required by IDEA. Moreover, it is questionable whether co-taught CWC classrooms are the least restrictive environment given the learning arrangements students are placed into and the instructional activities that teachers use. And, the same conclusion can be drawn regarding adapted and resource room instruction. In summary, the quality of education, as assessed by the instructional and management activities observed in this study, is of questionable quality in each of the three instructional settings. These four findings raise questions about the quality of education not only for students with disabilities but for all students.

Limitations

This study has several limitations. Data collection occurred over three days and only in one high school. Therefore, limited generalization can be justified. However, given the middle class nature of the school where data were collected and the school's reputation within the community for high academic achievement, it is doubtful that dramatically better instruction would have been observed elsewhere.

Another limitation of this study is that the observational methodology of MTS does not capture all behavior. When behaviors are extremely brief or occur infrequently MTS can underestimate percentage of intervals in those behaviors (Repp, Roberts, Slack, Repp, & Berkler, 1976); however, Murphy and Goodall (1980) and Gardenier, MacDonald, and Green (2004) establish that MTS is preferable to other time sampling methodology because it results in lower measurement error when intervals are brief. Nevertheless, results of this study related to student time on-task and major transitions should be viewed with some skepticism. After all, in well-managed high school classrooms, spotting off-task behavior can be difficult due to infrequency and the skill with which adolescents disguise off-task behavior. Finally, skilled instructors quickly transition between instructional activities and learning arrangements. However, with MTS these transition periods are only recorded if they occur at the beginning of the time interval; therefore, more transitions may have occurred than is reflected by percentage of time intervals, thereby underestimating transition time. Given these limitations, these findings are preliminary, but they do point to several trends in the educational experience of students with disabilities in large urban high schools.

Future Research

The following issues should be considered in future research efforts. First, research should continue in the area of typical instructional practice and activity in both general education and special education high school classrooms. Much attention has been paid to instructional practice in general education elementary classrooms, but little is known about the typical instructional experience of high school students. Continuing research in this area requires that measurement systems, like the observational system in this study, be developed, tested, and validated. Measurement systems could be used for three separate activities: first, as a research instrument to compare different instructional settings, content areas, and educational systems; second, as a teacher evaluation tool for administrators; and third, as a data collection tool for coaches. As a research tool, the observation instrument used in this study may be appropriate. However, as an administrative teacher evaluation tool or coach's data collection tool the number of learning arrangements and instructional activities may need to be reduced in order to improve reliability among un- or less-trained observers.

Second, for students with disabilities, access to the general education curriculum requires at least two elements: physical inclusion with their peers and pedagogy that opens the curriculum to diverse learning needs. Given the results of this study, a new pedagogy may need to be learned by general and special educators who support students with disabilities in the general education curriculum. Regardless of what new practices must be learned, this will likely require changes to pre-service training at the academy and ongoing professional learning for currently practicing teachers. Research in this area is suggested.

Third, one variable not explored in this study was whether or not general and special educators co-plan for instruction prior to co-teaching a lesson, something that researchers (Walther-Thomas, 1997; Walther-Thomas, Bryant, & Land, 1996) have described as necessary for co-teaching. Moreover, co-planning was included in nearly all studies of co-teaching where improved student performance was found (Bear & Proctor, 1990; Harris et al., 1987; Klinger, Vaughn, Hughes, Schumm, & Elbaum, 1998; Marston, 1996; Patriarca & Lamb, 1994; Self, Benning, Marston, & Magnusson, 1991). It may be that co-planning for instruction has greater impact on instructional practice than the presence of a special educator inside the general education classroom. Results from this study suggest there is a gap between the research and prescriptive literature and the instructional practices used by teachers in schools. Additional research is necessary to confirm this finding, ideally using a nationally representative sample of schools.

Fourth, research to understand why teachers are not engaged in instruction for such a large portion of the instructional class period is suggested. Qualitative research methods are uniquely suited to identify the barriers that prevent teachers from utilizing this time. Once these barriers have been identified, interventions can be developed and implemented that reduce the portion of class time that teachers are not engaged in instruction, therefore increasing the potential for learning in high schools. These interventions may be focused on the individual teacher, organizational configuration, or communication systems. Once these interventions have been implemented, research should continue to measure the effects.

Finally, learning arrangements and instructional practices used in the adapted and resource classroom settings closely mirrored teaching in co-taught general education classrooms. This raises questions about whether instructional differences exist between general education and special education for students with LD. Granted, adapted class sizes were smaller than co-taught classes, however the profile of instructional activities looked largely the same. Therefore, more research on the typical educational experience of students with disabilities in various settings is warranted.

REFERENCES

- Alvermann, D.E. (1981). The compensatory effect of graphic organizers on descriptive text. *Journal of Educational Research*, 75, 44–48.
- Armento, B. (1977). Teacher behaviors related to student achievement on a social science concept test. *Journal of Teacher Education*, 28, 46–52.
- Bear, G.G., & Proctor, W.A. (1990). Impact of a full-time integrated program on the achievement of nonhandicapped and mildly handicapped children. *Exceptionality*, 1, 227–238.
- Boudah, D.J., Lenz, B.K., Bulgren, J.A., Schumaker, J.B., & Deshler, D.D. (2000). Don't water down? Content learning through the unit organizer routine. *Teaching Exceptional Children*, 32, 48–56.
- Burns, R.B. (1984). How time is used in elementary schools: The activity structure of classrooms. In L.W. Anderson (Ed.), *Time and school learning: Theory, research and practice*. London: Croom Helm.
- Chorzempa, B.F., & Graham, S. (2006). Primary-grade teachers' use of within-class ability grouping in reading. *Journal of Educational Psychology*, 98, 52–541.
- City, E.A., Elmore, R.F., Fiarman, S.E., & Teitel, L. (2009). *Instructional rounds in education: A network approach to improving teaching and learning*. Cambridge, MA: Harvard Education Press.
- Cohen, E.G. (1994). Restructuring the classroom: Conditions for productive small groups. *Review of Educational Research*, 64, 1–35.
- Daniel, L.G., & King, D.A. (1998). Impact of inclusion education on academic achievement, students behavior and self esteem, and parental attitudes. *Journal of Educational Research*, 91, 67–80.
- Deshler, D.D., Ellis, E.S., & Lenz, B.K. (1996). *Teaching adolescents with learning disabilities: Strategies and methods* (2nd ed.). Denver, CO: Love Publishing.
- DiCecco, V.M., & Gleason, M.M. (2002). Using graphic organizers to attain relational knowledge from expository text. *Journal of Learning Disabilities*, 35, 306–320.
- Doyle, W. (1984). How order is achieved in classrooms: An interim report. *Journal of Curriculum Studies*, 16, 259–277.
- Doyle, W. (1986). Classroom organization and management. In M.C. Wittrock (Ed.), *Handbook of Research on Teaching* (3rd ed.) (pp. 392–431). New York: MacMillan Publishing Company.
- Dunston, P.J. (1992). A critique of graphic organizer research. *Reading Research & Instruction*, 31, 57–65.

- Evertson, C., Anderson, L., & Brophy, J. (1978). *Texas Junior High School Study: Final report of process-outcome relationships* (Report No. 4061). Austin, TX: University of Texas, R&D Center for Teacher Education.
- Evertson, C., & Emmer, E. (1982). Effective management at the beginning of the school year in junior high classes. *Journal of Educational Psychology*, 74, 485–498.
- Fisher, C.W., Filby, N.M., Marliave, R., Cahon, L.S., Dishaw, M.M., Moore, J.E., & Berliner, D.C. (1978). *Teaching behavior, academic learning time, and student achievement: Final Report of Phase III-B, Beginning Teacher Evaluation Study*. San Francisco: Far West Educational Laboratory for Educational Research and Development.
- Gage, N.L. (1965). *Handbook of research on teaching: A project of the American Educational Research Association*. Chicago: Rand McNally.
- Gagné, R. (1970). *The conditions of learning*. New York: Holt, Rinehart & Winston.
- Gamoran, A. (1992). Synthesis of research: Is ability grouping equitable? *Educational Leadership*, 50, 11–13.
- Gardener, N.C., MacDonald, R., & Green, G. (2004). Comparison of direct observational methods for measuring stereotypic behavior in children with autism spectrum disorder. *Research in Developmental Disabilities*, 25, 99–118.
- Good, T.L., & Grouws, D. A. (1979). The Missouri mathematics effectiveness project. *Journal of Educational Psychology*, 71, 355–362.
- Gildroy, P.G. (2001). The development and evaluation of an instructional modeling routine for students with learning disabilities. *Dissertation Abstract International*, 63 (10), 3516 (UMI No. 3067084).
- Griffin, C.C., & Tulbert, B.L. (1995). The effect of graphic organizers on students' comprehension and recall of expository text: A review of the research and implications for practice. *Reading & Writing Quarterly*, 11, 73–89.
- Gump, P.V. (1967). *The classroom behavior setting: Its nature and relation to student behavior (Final report)*. Washington, DC: U.S. Office of Education, Bureau of Research. (ERIC Document Reproduction Service No. ED 015 515).
- Harris, K.C., Harvey, P., Garcia, L., Innes, D., Lynn, P., Munoz, D., Sexton, K., Stoica, R. (1987). Meeting the needs of special high school students in regular education classrooms. *Teacher Education and Special Education*, 10, 143–152.
- Hattie, J.A. (1999, June). *Influences on student learning* (Inaugural professorial address, University of Auckland, New Zealand). Retrieved April 11, 2010, <http://www.education.auckland.ac.nz/uoa/home/about/staff/j.hattie/hattie-papers-download/influences>.
- Hattie, J.A. (2003, October). *Teachers make a difference: What is the research evidence?* Retrieved April 11, 2010, [http://www.education.auckland.ac.nz/webdav/site/education/shared/hattie/docs/teachers-make-a-difference-ACER-\(2003\).pdf](http://www.education.auckland.ac.nz/webdav/site/education/shared/hattie/docs/teachers-make-a-difference-ACER-(2003).pdf).
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77, 81–112.
- Hiebert, E. (1983). An examination of ability grouping for reading instruction. *Reading Research Quarterly*, 18, 231–255.
- Horton, S.V., Lovitt, T.C., & Bergerud, D. (1990). The effectiveness of graphic organizers for three classifications of secondary students in content area classes. *Journal of Learning Disabilities*, 23, 12–22.
- Hudson, F. (1990). *Research reports for Kansas City, Kansas public schools division of special education on CTM—collaborative teaching model at Stony Point Sough Elementary School, 1989–90*. Kansas City: University of Kansas Medical Center, Department of Special Education.
- Hughes, C.A., & Archer, A. (in press). *Teaching students with learning difficulties: Making instruction effective and explicit*. New York: Guilford Publications.
- Hunter, M., & Russell, D. (1981). Planning for effective instruction: Lesson design. In *Increasing your teaching effectiveness*. Palo Alto, CA: The Learning Institute.
- Individuals with Disabilities Education Act (IDEA) of 1997, 20 U.S.C. §1400 *et seq.* (1997).
- Individuals With Disabilities Education Improvement Act (IDEA) of 2004, 20 U.S.C. §1400 *et seq.* (2004).
- Ives, B., & Hoy, C. (2003). Graphic organizers applied to higher-level secondary mathematics. *Learning Disabilities Research & Practice*, 18, 36–51.
- Katayama, A.D., & Crooks, S.M. (2003). Online notes: Differential effects of studying complete or partial graphically organized notes. *Journal of Experimental Education*, 71, 293–312.
- Katayama, A.D., & Robinson, D.R. (2000). Getting students “partially” involved in note-taking using graphic organizers. *Journal of Experimental Education*, 68, 119–133.

- Kim, A., Vaughn, S., Wanzek, J., & Wei, S. (2004). Graphic organizers and their effects on the reading comprehension of students with LD: A synthesis of research. *Journal of Learning Disabilities*, 37, 105–118.
- Klinger, J.K., Vaughn, S., Hughes, M.T., Schumm, J.S., & Elbaum, B. (1998). Outcomes for students with and without learning disabilities in inclusive classrooms. *Learning Disabilities Research & Practice*, 13, 153–161.
- Kounin, J.S. (1970). *Discipline and group management in classrooms*. New York: Holt, Rinehart & Winston.
- Lenz, B.K., Alley, G.R., & Schumaker, J.B. (1987). Activating the inactive learner: Advance organizers in the secondary content classroom. *Learning Disability Quarterly*, 10, 53–67.
- Marston, D. (1996). A comparison of inclusion only, pull-out only, and combined service models for students with mild disabilities. *Journal of Special Education*, 30, 121–132.
- McNamara, E., & Jolly, M. (1990a). The reduction of disruptive behavior using feedback of on-task behavior: An across setting study of a class of 12- and 13-year-olds. *Behavioural Psychotherapy*, 18, 103–119.
- McNamara, E., & Jolly, M. (1990b). Are disruptive behaviours reduced when levels of on-task behaviours increase? An across settings study of a class of 12- and 13-year-old pupils—II. *Behavioural Psychotherapy*, 18, 239–249.
- Murphy, G., & Goodall, E. (1980). Measurement error in direct observations: A comparison of common recording methods. *Behavior Research and Therapy*, 18, 147–150.
- NCES. (2009). *CCD public school data 2007–2008*. National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Retrieved April 9, 2010, <http://nces.ed.gov/>.
- Oakes, J. (1987). Tracking in secondary schools: A contextual perspective. *Educational Psychologist*, 22, 129–153.
- Ornstein, A.C. (1995). Synthesis of Research: Teaching whole-group classrooms. *Peabody Journal of Education*, 70, 104–116.
- Patriarca, L.A., & Lamb, M.A. (1994). Collaboration, curriculum development and reflection as frameworks for exploring the integration of general and special education. *B.C. Journal of Special Education*, 18, 95–100.
- Powell, J., Martindale, B., Kulp, S., Martindale, A., & Bauman, R. (1977). Taking a closer look: Time sampling and measurement error. *Journal of Applied Behavior Analysis*, 10, 325–332.
- Ramsey, B.D., Dion, G.S., & Donahue, P.L. (2009). *NAEP 2008 trends in academic progress* (NCES 2009–479). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C.
- Repp, A.C., Roberts, D.M., Slack, D.J., Repp, C.F., & Berkler, M.S. (1976). A comparison of frequency, intervals, and time-sampling methods of data collection. *Journal of Applied Behavior Analysis*, 9, 501–508.
- Richardson, V. (2001). *Handbook of research on teaching* (4th ed.). Washington, D.C.: American Educational Research Association.
- Robinson, D.H. (1998). Graphic organizers as aids to text learning. *Reading Research and Instruction*, 37, 85–105.
- Robinson, D.H., & Kiewra, K.A. (1995). Visual argument: Graphic organizers are superior to outlines in improving learning from text. *Journal of Educational Psychology*, 87, 455–467.
- Rosenshine, B.V. (1980). How time is spent in elementary classrooms. In C. Denham & A. Lieberman (Eds.), *Time to Learn*. Washington, DC: National Institute of Education.
- Rosenshine, B., & Stevens, R. (1986). Teaching functions. In M.C. Wittrock (Ed.), *Handbook of Research on Teaching* (3rd ed.) (pp. 376–391). New York: MacMillan Publishing Company.
- Sanders, W.L., & Rivers, J.C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Knoxville, TN: University of Tennessee.
- Self, H., Benning, A., Marston, D., & Magnusson, D. (1991). Cooperative teaching project: A model for students at risk. *Exceptional Children*, 58, 26–33.
- McCall, Z., & Skrtic, T.M. (in press). Intersectionality as a policy frame for disproportionality and other wicked problems. *Multiple Voices*.
- Schulte, A.C., Osborne, S.S., & McKinney, J.D. (1990). Academic outcomes for students with learning disabilities in consultation and resource programs. *Exceptional Children*, 57, 162–171.
- Slavin, R.E. (1989). Class size and student achievement: Small effects of small classes. *Educational Psychologist*, 23, 99–110.

- Snyder, T.D., & Dillow, S.A. (2010). *Digest of Education Statistics 2009* (NCES 2010-013). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.
- Soukup, J.H., Wehmeyer, M.L., Bashinski, S.M., & Bovaird, J.A. (2007). Classroom variable and access to the general curriculum for students with disabilities. *Exceptional Children*, 74, 101-120.
- Stone, C.L. (1983). A meta-analysis of advance organizer studies. *The Journal of Experimental Education*, 51, 194-199.
- Swanson, H.L., & Deshler, D.D. (2003). Instructing adolescents with learning disabilities: Concerting a meta-analysis to practice. *Journal of Learning Disabilities*, 36, 124-135.
- Tyler, S. (1979). Time sampling: A matter of convention. *Animal Behavior*, 27, 801-810.
- Waldron, N.L., & McLeskey, J. (1998). The effects of an inclusive school program on students with mild and severe disabilities. *Exceptional Children*, 64, 395-405.
- Vekiri, I. (2002). What is the value of graphical displays in learning? *Educational Psychology Review*, 14, 261-312.
- Walther-Thomas, C.S. (1997). Co-teaching experiences: The benefits and problems that teachers and principals report over time. *Journal of Learning Disabilities*, 30, 395-407.
- Walther-Thomas, C., Bryant, M., & Land, S. (1996). Planning for effective co-teaching: The key to successful inclusion. *Remedial and Special Education*, 17, 255-265.
- Wang, M.C., Haertel, G.D., & Walberg, H.J. (1993). Toward a knowledge base for school learning. *Review of Educational Research*, 63, 249-294.
- Warner, M.M., Schumaker, J.B., Alley, G.R., & Deshler, D.D. (1989). The role of executive control: An epidemiological study of school-identified learning disabled and low achieving adolescents on a serial recall task. *Learning Disabilities Research*, 4, 107-118.
- Webb, N.M., & Farivar, S. (1994). Promoting helping behavior in cooperative small groups in middle school mathematics. *American Educational Research Journal*, 31, 369-396.
- Wiederholdt, J.L. (1974). Planning resource rooms for the mildly handicapped. *Focus on Exceptional Children*, 8, 1-10.
- Wittrock, M.C. (1986). *Handbook of research on teaching* (3rd ed.). New York: Macmillan.
- Wright, C., & Nuthall, G. (1970). Relationships between teacher behaviors and pupil achievement in three experimental elementary science lessons. *American Educational Research Journal*, 7, 477-491.

APPENDIX A

SCORING PROTOCOLS AND DECISION CRITERIA—CLASSROOM OBSERVATION SHEET

Student on Task: At each time interval, please score this box. You should begin with the student in the front-left seat of the class, then work your way across the first row of students, and then begin the second row continuing until every student has been observed and scored on the observation sheet. If all students have been observed, begin again at the beginning front-left seat. If the student is on-task, mark "1" in the box. If the student is off-task, mark "O" in the box. Take care to ensure that both raters are observing and scoring the same student during each time interval.

Student on Task will be checked whenever the student is not actively engaged in the appropriate instructional activity. The student is off task if they are violating rules, engaging in social talk with peers, doing nothing, throwing something away, in the restroom, playing a non-instructional computer game, getting organized for a task (e.g., putting papers away into backpack), using their cell phone, etc. For example, if the teacher is lecturing and the student is looking through her backpack for a pencil, the student is not engaged and therefore off task.

Learning Arrangement: At each time interval, please score one of the following learning arrangements. Mark "1" in the box that best describes the learning arrangement of the students. If there is more than one type of learning arrangement in the classroom, only score the learning arrangement that the teacher is instructing or monitoring. For example, if a large group of students is working independently while the teacher provides additional instruction for a small group of students you should score the learning arrangement as "Small Group." The focus is on the teacher's behavior or activity.

Whole Group will be checked whenever all the students in a classroom are being instructed together. For example, the teacher might be lecturing, the class might be involved in a class-wide discussion, or the class might be watching a movie.

Large Group will be checked when most students in the classroom are provided the same instructional activity directed at most students simultaneously. Large groups range in size from greater than 1/3 of the students to one less than the entire class.

Small Group will be checked whenever the students have been assigned to work in small groups. Small groups range in size from 3 students to 1/3 of the class. For example, students might be doing a cooperative learning activity or engaged in small group reading instruction.

Individual Student-Teacher Led will be checked whenever the students are working one-on-one with a teacher in a clinical manner. For example, the teacher may be doing "experimental teaching," direct phonics instruction, or monitoring reading errors.

Student Peer Pairs will be checked whenever the students are working in pairs and have been formally instructed to work in pairs. If the class contains an odd number of students, one group may contain 3 students and still be scored "Student Peer Pairs." For example, students might be doing a "Turn-to-Your-Neighbor" activity or a class-wide peer tutoring activity.

Individual-Independent Work will be checked whenever the students are working independently. Students may be working quietly at their desks on a worksheet or whispering to a peer, but they have been asked to work on their own.

Transition Time: At each time interval, score this box. If the class is transitioning between activities, mark "1" in the box. If the class is NOT transitioning between activities, mark "0" in the box. Note, if some students appear to be transitioning and others students are not transitioning score "1."

Transition Time will be checked when the students are transitioning between classroom activities but not yet engaged in any learning activity. For example, if the bell rings to begin class and students are not seated yet. Or, if the teacher completes the lecture then asks students to begin working on their homework, the time between ending the lecture and when student beginning to work is transition time. Finally, if students quit working before the end of class, this is also transition time.

Instructional Activity: At each time interval, score one of the following instructional activities. Mark "1" in the box that best describes instructional activity. If more than one instructional activity is observed during the observation time period, only score the first instructional activity observed.

Lecture will be checked when the teacher talks to students without any, or minimal, student participation. The teacher may use the chalkboard, maps, or an electronic media (e.g., PowerPoint) while lecturing.

Describe Skill or Strategy will be checked for each interval the teacher is observed giving task explanations or explaining how to do something orally that requires several steps. For example, "In order to write this paper, you will need to do the following four things. ..." "To complete this experiment, you will need to follow the five following procedures. ...," "This math algorithm has three parts. ...," "This strategy has five steps ...". The steps or parts must be described.

Modeling

Implicit Modeling will be checked for each interval the target teacher spends modeling how to do something for instructional purposes. This refers to showing how to do an academic task that is to be copied or imitated by the student. For example, the teacher demonstrates how to solve a math problem. Please note, if the teacher physically demonstrates while also thinking out loud to verbalize the teacher's thinking, then you should check "Explicit Modeling."

Explicit Modeling will be checked for each interval the target teacher spends modeling how to do something for instructional purposes. This refers to showing how to do an academic task that is to be copied or imitated by the student WHILE verbally modeling the thought process the teacher is using to complete the task. For example, the teacher demonstrates how to do a lab experiment while asking questions and answering the questions so that students understand the thought process of a scientist. Please note, if the teacher only physically demonstrates while stating each step, then you should check "Implicit Modeling." Also, if the teacher does not physically demonstrate the procedure, a designation would be placed in the "Describes a Skill or Strategy" column.

Give Directions

Give Academic Directions will be checked for each interval the teacher spends orally giving simple instructional directions. This includes verbally directing, super-

vising, or managing classroom academic tasks and describing a grading rubric. For example, the teacher saying, "Turn to chapter 9 in your book," or "Please do the first 10 math problems on the worksheet."

Give Classroom Procedure Directions will be checked for each interval the teacher spends orally giving simple procedural directions. This includes (a) verbally directing students' behavior, (b) managing classroom procedures (e.g., bathroom and hall passes), (c) giving non-instructional directions to students (e.g., "Please shut the window, Susan."), (d) telling students how many points an assignment is worth, or (e) expressing disapproval, dislike, dismay, dissatisfaction, or disgust with a student's class work, appearance, or behavior. For example, the teacher saying, "Jonathan, please take your seat," or "Allison, that is not what our bathroom pass procedure is; you need to ..."

Monitoring and Questioning

Physical Observation will be checked for each interval the target teacher spends doing physical observation of students in order to monitor students. Examples of physical observation for the purpose of monitoring are: The teacher walking around students' desk or visually observing students to determine if they have completed work or are successfully doing work. When the teacher is monitoring a cooperative group activity or a pair activity, please note what the activity is in the description area. Please note, this activity should not be confused with giving feedback.

Questioning for Self-Answer will be checked when the teacher invites student to ask self-questions by way of engaging the learner but allows the learner not to self-disclose on a potentially sensitive subject (e.g., no response is required from the student). For example, the teacher asked a question to the class as a whole and said, "I don't want a verbal answer or show of hands, but think to your self: 'How many of you ever thought you'd wished you could be more confident when talking to your peers at school?'"

Questioning for Verbal Response will be checked when the teacher poses a question pertinent to the instructional topic at hand and asks one or more students to respond orally. Students are instructed to respond with a verbal answer but answers can be provided to a partner, generated by a team, individually, or as a choral response.

Questioning for Written Response will be checked when the teacher poses a question pertinent to the instructional topic at hand and asks one or more students to respond in writing. Students are instructed to respond with a written answer using response cards, response slates, by writing on the chalkboard, or writing on a sheet of paper.

Questioning for Action Response will be checked when the teacher poses a question pertinent to the instructional topic at hand and asks one or more students to respond with an *action* or *movement*. Students are instructed to respond with a physical movement by touching/pointing, acting out something, using gestures such as thumbs up, or giving facial expressions (smiley face/sad face).

Listening will be checked when the teacher is attentively listening to a student's verbalizations for 10-seconds or longer. The teacher must emit at least one attentive behavior during the interval. Attentive behaviors include eye contact, "uh-uh" verbalizations, head nodding, and/or linguistic listening cues. (e.g., "I understand," etc.).

Review

Facts/Concepts/Procedure will be checked when the teacher makes a statement or asks a question(s) that requires the student to show that the student remembers or understands the factual content or concept or knows the steps/procedures for completing a task (e.g., solving a particular type of math problem or the steps for constructing a good outline). For example, the teacher may ask the class to state the formula for calculating the area of a triangle.

Manipulate/Generalize will be checked when the teacher makes a statement or asks a question(s) that requires the student to show that the student can generalize or apply a previously learned skill, or manipulate new information using a recently learned skill to new content or to a novel or practical life situation. For example, if the class recently learned about osmosis and selective diffusion by experimenting with chicken eggs, the teacher may ask about how osmosis would occur in human cells.

Skill or Strategy will be checked when the teacher makes a statement or asks a question(s) that requires the student to show that the student understands the underlying skills or strategies of effective academic performance. For example, if students in astronomy are learning about the life cycle of stars, reviewing how to exam-

ine the textbook organization would be helpful to structuring student thinking and finding appropriate information in the text.

Feedback

Simple Feedback will be checked for each interval during which the teacher verbally tells a student or group of students whether their answer or performance is correct or incorrect. This includes summarizing information that students have said. For example, when student gives the correct answer and the teacher simply acknowledges it but does not give more elaborate feedback. Please note, if the teacher provides elaborated feedback or asks follow-up questions as a means of giving elaborated feedback, this should be scored as "Elaborated Feedback on Learning."

Elaborated Feedback will be checked for each interval during which the teacher orally provides private or specific feedback to a student with regard to something the student has done. Teacher gives information on student performance when constructing meaning, or related to the processes underlying strategies or skills of completing, relating, or extending a skill or strategy. The feedback might include describing an error category or pattern of error, explaining how to avoid the error, modeling a new way or performing, having the student practice a new way of performing, having the student paraphrase how to perform in the future, and having the student set one or more goals for the next performance. For example, if the student gives the correct answer to a math question but doesn't seem to understand how they reached the correct answer, the teacher provides elaborated feedback on the process used to reach the answer while checking for student understanding at different points in this re-teaching process.

Graphic Devices and Organizers

Advance Organizer will be checked for each interval the teacher orally presents information about the upcoming lesson in a relatively simple way. The oral presentation should provide an overview, cite the purpose or goal(s) of the lesson or activity, state the topic or present a specific order that the lesson or activity will follow. For example, the teacher might state, "Today we are going to be studying about the causes of the Civil War." This is different from the "Other Graphic Devices" category in that it does not involve a content map for the lesson, lesson questions, and other parts of the Content Enhancement Routines.

Post Organizer will be checked for each interval the teacher orally presents information about that day's lesson in a relatively simple way. This statement should be at the end of the lesson or instructional activity and should summarize the main points of the lesson or activity. For example, the teacher might state, "We just learned about the various causes of the Civil War. These causes were . . ."

Other Graphic Devices (e.g., study guide, CE) will be checked for each interval the teacher is presenting information about the lesson with the aid of a graphic device. Teacher uses a graphic device to enhance learning by transforming, repackaging, or manipulating the content. Some examples of graphic devices include Venn diagrams, content maps, or study guides.

Reading Instruction

Teacher Reads to Students will be checked when the teacher is verbally reading a passage that students are expected to "follow along" with.

Shared Reading will be checked when one student in the class is reading out loud while other students are expected to follow along in the text. After a period of time, another student begins reading aloud and the first student stops, this continues at the direction of the teacher.

Simple Silent Reading will be checked when the teacher instructs all students to read silently to themselves.

Augmented Silent Reading will be checked when the teacher instructs all students to do the following two tasks: (1) To find the answer to a question in the reading and (2) instructs students who finish early to re-read the passage.

Reading Strategy will be checked when the teacher directs students to use a comprehension learning strategy while reading. For example, the teacher may ask a student to predict what will happen next, summarize plot developments for each chapter, or infer the meaning of some words and give a rationale.

Computer Mediated Instruction will be checked when the primary mode of instruction involves the use of a computer or computerized mechanism to either present reading instruction to the student, test a student, or provide assistance to a student during a learning task. This includes computerized reading instructional programs such as *Read 180*. Please note, if the teacher is working in small groups with some students engaged in instruction while other groups are using a computerized instructional program, do not check this item; instead, mark the appropriate instructional practice the teacher is using.

Formal Assessment of Learning

Test will be checked when the teacher instructs students to complete a long assessment during the class period. The test is a long exam given to students for the purpose of assigning a grade/value to the student's performance.

Quiz will be checked when the teacher instructs students to complete a short assessment during the class period. The quiz is a short exam given to students for the purpose of assigning a grade/value to the student's performance.

Formative Progress Monitoring will be checked when the teacher instructs students to complete a very short formative assessment. The results of the task are not assigned a grade/value but instead are used to inform the teacher about individual student's degree of mastery of a new body of knowledge or skill.

Video will be checked when a film, video, or clip is shown in class as the primary means of instruction.

Un-Engaged Time

Not Engaged in Instruction Time will be checked for each interval during which the teacher spends (a) grading papers, (b) passing out papers, (c) taking attendance/writing student pass, (d) having a discussion with another adult in the classroom, (e) completing paperwork or computerized forms, (f) talking on phone for any purpose, (g) engaging in personal activities (e.g., reading a newspaper, filing nails, etc.), (h) reading professional reading materials, or (i) accessing, writing, or sending emails.

APPENDIX B

Observer: _____ Date: _____ Subject: _____

Observe the group and the teacher before the class begins (before 9:00 AM). Then, record the first observation on the designated line. This observation should be completed within 30 seconds. Then, with 30 more seconds to begin the next observation. There are 100 seconds of observation to record. If the designated student is on task, mark 1 in the box. If the student is off task, mark 0. Mark 1 in only one of the Instructional Activity Boxes. Finally, only mark the first instructional activity observed during the 10-second observation interval.

Activity Boxes: Finally, only mark the first instructional activity observed during the 10-second observation interval.

Learning Arrangement	Instructional Activity										Teacher	Student	Total
	Whole Group	Small Group (1/3 to 1/2 Class)	Individual-Teacher Lead	Student Peer Pairs	Individual-Independent	Transition Time	Classroom Management	Classroom Organization	Classroom Climate	Classroom Culture			
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
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19													
20													

Observer: _____ Date: _____ Subject: _____

KU CENTER FOR RESEARCH ON LEARNING—THE UNIVERSITY OF KANSAS

THE CONTENT LITERACY CONTINUUM: A SCHOOL REFORM FRAMEWORK FOR IMPROVING
ADOLESCENT LITERACY FOR ALL STUDENTS

B. KEITH LENZ, BARBARA J. EHREN, AND DONALD D. DESHLER

Making the commitment to improve literacy in secondary schools must be at the very heart of school reform efforts. Too often, literacy improvement efforts are par-
 enthetical to other goals in secondary education. Teachers and educators systemati-
 cally discriminate against those who do not have the literacy skills to meet course
 demands and against teachers and staff involved in advocating for or providing lit-
 eracy services. This unfortunate situation lessens the importance of secondary
 schools in preparing our children to succeed in college and to compete in society.
 It also has consistently and systematically left millions of students behind.

Recent evidence indicates that policymakers and advocates of secondary school re-
 form are taking seriously the problems of adolescent literacy and are turning their
 attention to supporting research-based efforts to improve it. These groups place in-
 creasing emphasis on students successfully completing more rigorous secondary core
 content courses, on students meeting standards as measured on state assessments,
 on schools addressing the needs of an increasing number of English language learn-
 ers in classrooms, and on moving all students toward a standard of college readiness
 that will allow them to be successful after high school.

For the past 15 years, a significant research thread at the University of Kansas
 Center for Research on Learning (KU-CRL) has been to design and test effective
 school-wide literacy instruction in secondary schools. A series of studies focused on
 how to increase the success of high school students in rigorous academic courses re-
 vealed several factors that challenge secondary educators who are seriously con-
 cerned about improving the performance of all students to make literacy a central
 part of school improvement and reform agendas:

1. Requirements for teachers to ensure that all students meet standards have
 put pressure on teachers to teach more content faster. This has led to an instruc-
 tional focus on breadth of coverage rather than depth of understanding. Con-
 sequently, students are required to be more independent and self-sufficient learners,
 leaving students who have limited literacy skills and strategies unable to acquire
 the content and, as a result, meet standards.

2. Because many students do not have the literacy skills and strategies neces-
 sary to meet these standards, core curriculum teachers must face the challenge
 of compensating for the lack of these skills and strategies to ensure mastery of crit-
 ical content, regardless of literacy levels.

3. Attention to the connected development of increasingly complex vocabulary
 and background knowledge is needed if comprehension is to improve and students
 are to benefit from instruction in grade-appropriate comprehension strategies.

4. Students must have authentic and successful experiences using newly ac-
 quired literacy skills and strategies in core curriculum courses to solve problems
 and meet high school course demands if they are to become motivated to develop
 literacy skills.

5. Direct instruction, teacher modeling, and practice in literacy strategies must
 become authentically embedded in the teaching practices of all secondary teachers
 so that students will have sufficient opportunities to practice and generalize these
 skills and strategies.

6. Secondary core curriculum teachers can promote literacy by planning and fo-
 cusing on critical content and critical comprehension strategies so that instruction
 is targeted and mastery is achieved for all learners.

7. Even when instruction, modeling, and practice is provided across secondary
 courses, many poor readers will need additional intensive instruction and practice
 in these strategies if they are to master and use them effectively.

8. Students who do not comprehend well but who have developed fluent word
 recognition skills through the fourth-grade level need opportunities for direct, sys-
 tematic, and intensive instruction in learning strategies that are appropriate for
 handling both expository and narrative text.

9. Opportunities for direct, systematic, intensive instruction in sound-symbol cor-
 respondence, word automaticity and fluency are needed to address the word recogni-
 tion skills for those adolescents who are reading below the fourth-grade level.

Collectively, these factors challenge secondary schools to make a dramatic shift
 in the way they organize and deliver instruction, if both content and literacy goals
 are to be realized. Only by adopting a schoolwide approach to literacy in which

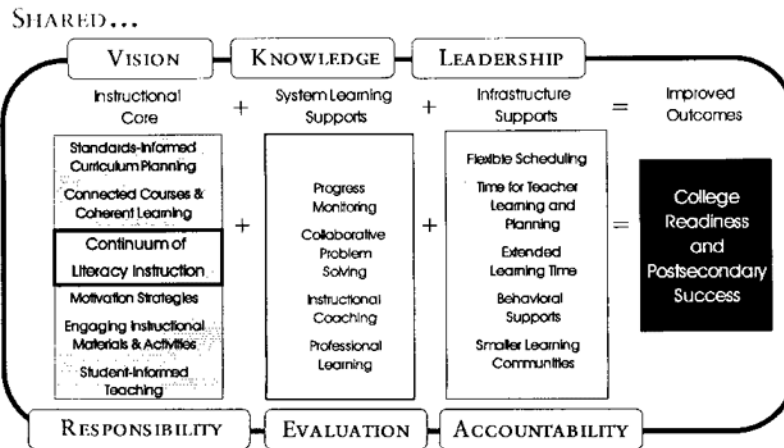
every teacher is committed, involved, and championing coordinated literacy improvement efforts can we make our secondary schools count for all students.

MEETING THE CHALLENGE

There have been efforts to reform secondary schools to improve learning in ways that lead to outcomes that meet the standard of college readiness and post-secondary success. Most efforts to reform secondary schools have focused on creating infrastructure supports by adding block and flexible scheduling of courses, providing additional time for teacher learning and planning, providing behavioral supports to improve discipline, and creating opportunities for more personalized learning by restructuring schools into smaller learning communities. Other school reform efforts have focused on creating system learning supports to more closely monitor student progress, collaboratively make decisions to address problems in learning, encouraging coaching among one another to improve instructional effectiveness, and creating a culture in which staff value and embrace continuing collaborative learning and school improvement.

Although many of these secondary school reform efforts have addressed important problems that have been barriers to improving the academic achievement of students, they have not been able to significantly affect the quality of classroom instruction provided nor improve the outcomes of academically diverse groups of students. More recently, it has become clear that structural and systemic supports must be accompanied by attention to improvement to the instructional core of the secondary school. This instructional core must include attention to an aligned instructional system that is based on standards-informed instruction, connected and coherent courses, engaging instructional materials and activities, and instruction that is informed by the knowledge and backgrounds of students to anchor relevant and meaningful learning. Furthermore, the instructional core must be centered on a view of secondary schools that is grounded in providing a continuum of literacy instruction that ensures the ongoing development of those learning skills and strategies required for college readiness and post-secondary success. (See Figure 1)

FIGURE 1: CRITICAL VALUES FOR SYSTEM CHANGE



...THAT RESPECTS THE INDIVIDUAL IN THE SYSTEM

As a result of our research, the staff of the KU-CRL has developed a framework called the Content Literacy Continuum (CLC; LenzEhren, 1999). This structure provides a vehicle for (a) considering the factors that influence the success of secondary literacy efforts, (b) leveraging the talents of secondary school faculty, and (c) organizing instruction to increase in intensity as the deficits that certain subgroups of students demonstrate become evident.

The CLC has been used to guide the use of interventions in the Strategic Instruction Model (SIM) developed by KU-CRL over the past 27 years. However, as a framework, the CLC is sufficiently comprehensive in scope to accommodate any research-validated intervention that has been effective with adolescent populations. In

short, the CLC is a tool for enabling all secondary teachers and administrators to participate in the development and evaluation of a literacy initiative that is consistent with the goals of secondary education for all students and that will dramatically improve literacy outcomes for those who are at risk of academic failure.

The five levels or types of instruction associated with the CLC are presented and described in Figure 2. These five levels are based on keeping content as a central focus in literacy efforts, defining roles and responsibilities of all school-level educators, providing a continuum of instructional intensity for ensuring success for a wide range of students, and providing a framework for integrating a variety of literacy improvement efforts. Each of these levels collectively represent a framework for organizing secondary reform around the goals of improved literacy.

It is important to note that secondary educators must work collaboratively to synchronize instruction across the five levels to ensure the success of a schoolwide literacy effort. The continuum of instruction represented in the CLC framework is more than a way of sorting or organizing instructional practices and commercial educational programs. Several instructional principles define how the levels of instruction should be implemented to complement and reinforce one another to ensure a coherent learning experience for students. First, the instruction provided at each level should reinforce a common set of literacy strategies that can be enhanced and leveraged at each level of the continuum. This cross-level focus ensures that students are learning a set of critical core strategies with sufficient opportunities to practice different applications across different content areas and under different conditions. Second, content enhancements used to ensure content area learning at Level 1 of the CLC that compensates for poor learning strategies should be built on and around the critical core set of literacy strategies taught and practiced at the other levels of the continuum. Third, the literacy strategies that define Levels 2 and 3 should help students apply the skills acquired from instruction in Level 4. Fourth, the intervention provided by a speech-language professional represented in Level 5 should be informed by the core set of literacy strategies and content enhancements. In other words, CLC should not be thought of as framework for siloing programs that seem to fit at a given level. Regardless of the program, there are instructional conditions that must be created across the levels regardless of the goals of individual programs to create the type of instructional synergy necessary to improve literacy in secondary schools.

THE CLC ADOPTION AND IMPLEMENTATION PROCESS

Adopting the CLC requires a focused schoolwide effort. A school interested in putting the CLC in place needs to take stock of the literacy and content mastery performance of students, as well as its existing efforts to meet literacy needs. Faculty should consider how the efforts already under way fit into each of the five CLC levels and learn how to integrate SIM and other necessary components into current practices. Initial adoption takes place over a 3- to 5-year period as school staff work through activities associated with the phases of planning, implementing, and sustaining a literacy improvement initiative. A commitment for the duration of the adoption process on the part of the administration and faculty is a necessary component.

A hallmark of the entire adoption process is that it is co-constructed with school leaders, resulting in a growth partnership. It is clear that one of the reasons that secondary school reform efforts have failed to significantly improve the academic performance of all students is that few efforts have addressed the unique culture that shapes the likelihood of change in secondary schools. System change in secondary schools must be closely tied to the individual in the system responsible for the nature and quality of classroom instruction. Therefore, the success of literacy-centered secondary school reform is likely to hinge on the ability of school leaders to collaboratively co-construct change with teachers. School leaders must be able to create a shared (a) vision that allows for individual contributions, (b) knowledge base that leads to individual learning, (c) system of leadership that seeks the voice of individuals, (d) sense of responsibility that shapes individual planning and action, (e) system of evaluation that guides self assessment, and (f) accountability system that motivates individual action. Using this set of values to guide reform would call into question traditional systemic approaches that rely solely on top-down models to accomplish school change.

CONCLUSION

Although professional development is required to implement the CLC, it is more appropriate to conceptualize CLC adoption as a school-improvement initiative requiring more than professional development. Adopting the CLC is framed in the

context of helping schools meet their school-improvement goals. The current focus of schools and school districts on meeting the No Child Left Behind requirements regarding Adequate Yearly Progress (AYP) typically enhances the motivation of schools to target improvement efforts on behalf of all learners. Serious attention must be paid to tapping into or creating the infrastructures to promote individual and systemic change, including data-based decision making, effective leadership activities, and the creation of professional learning communities.

REFERENCES

- Lenz, B.K., Bulgren, J., Kissam, B., & Taymans, J. (2004). SMARTER planning for academic diversity. In Lenz, B.K., Deshler, D.D., & Kissam, B. (Eds.), *Teaching content to all: Inclusive teaching in grades 4–12* (PP. 47–77). Boston: McGraw-Hill.
- Lenz, B.K. & Ehren, B. (1999). The strategic content literacy initiative: Focusing on reading in secondary schools. *Stratenotes*, 8.1. Retrieved June 1, 2005, from University of Kansas Center for Research on Learning Web site: <http://www.kucrl.org>.
- Lenz, B.K., Schumaker, J.B., Deshler, D.D., & Beals, V. (1984). *The learning strategies curriculum: The word identification strategy*. Lawrence: University of Kansas, Center for Research on Learning.
- Lenz, B.K., with Bulgren, J.A., Schumaker, J.B., Deshler, D.D., & Boudah, D.J. (1994). *The unit organizer routine*. Lawrence, KS: Edge Enterprises.
- Schumaker, J.B., Denton, P.H., & Deshler, D.D. (1984). *The learning strategies curriculum: The paraphrasing strategy*. Lawrence: University of Kansas, Center for Research on Learning.

Figure 2: The Content Literacy Continuum

A Framework for Guiding the Development of Schoolwide Literacy Services in Secondary Schools

Level of Instruction	Teacher Actions	Example	Professional Competence
Level 1: Enhanced Content Instruction. Goal: Students learn critical content required in the core curriculum regardless of literacy levels.	Teachers: (a) ensure mastery of critical core content for all students regardless of literacy levels by leveraging the principles of universal design in explicit teaching routines, (b) ensure that all students acquire the vocabulary and background knowledge required for basic literacy associated with comprehension and communication through classwide accommodations, individual accommodations, or technology, and (c) respond to increasingly complex content demands requiring strategic manipulation of content such as categorizing, developing analogies, comparing, questioning, or evaluating.	Teachers use Content Enhancement Routines such as The Unit Organizer Routine to deliver content. Teachers use standards-based planning models to target critical content that needs to be enhanced.	Teachers responsible for ensuring content mastery must select the critical content, learn how to enhance that content for mastery, and then implement these enhancements through the use of explicit and sustained teaching routines. Special service providers must help core curriculum teachers provide this type of instruction. This facilitates a mindset in which instruction is delivered in ways that students acquire content information as well as active approaches to learning and responding.

Figure 2: The Content Literacy Continuum—Continued

A Framework for Guiding the Development of Schoolwide Literacy Services in Secondary Schools

Level of Instruction	Teacher Actions	Example	Professional Competence
Level 2: Embedded Strategy Instruction. Goal: Students are presented opportunities to learn and apply a set of powerful learning strategies for improving literacy across core curriculum classes to learn critical content.	From a small set of powerful learning strategies, teachers select one or two strategies that match the specific demands needed to learn the critical content in their core curriculum courses. Teachers use direct explanation, modeling, and group practice to teach the strategy and then prompt student application and practice in content-area assignments throughout the school year. For students receiving more intensive strategy instruction (Level 3), teachers assist them in generalizing strategy use to core curriculum courses. Instruction in strategies is embedded across a number of instructional settings, including settings in which tutoring is provided.	Teachers teach the steps of a paraphrasing strategy (RAP), regularly model its use, and then embed paraphrasing activities in course activities through the year to create a culture of “reading to retell.” Graphic organizers (e.g., The Unit Organizer) introduced as part of Level 1 instruction are used to model and prompt paraphrasing of critical chunks of content.	Teachers adopt a mindset that it is important to embed instruction in learning strategies within content-area instruction. Content teachers learn a shortened form of an Eight-Stage Instructional Sequence for selected learning strategies (e.g., Paraphrasing, Self-Questioning, etc.) that they can use to provide classwide instruction. Teachers assist in the generalization of strategies that may emerge from Level 1 instructional routines; these emerging strategies may guide students in strategic approaches to content literacy demands such as making comparisons, categorizing, or questioning.
Level 3: Intensive Strategy Instruction. Goal: Students who need more intensive strategy instruction than what can be provided through embedded strategy instruction are provided more intensive and explicit strategy instruction.	Special education teachers, reading teachers, and other support personnel provide more intensive instruction through additional learning experiences. These may be provided in the general education classroom, in a pullout program, through the offering of a separate course, or through beyond-school tutoring programs. Assessments for screening and ongoing data-based decision making are put in place to help identify students who may profit from these courses. These students are generally those who minimally have developed the decoding skills and fluency levels associated with reading proficiency at the third- to fourth-grade level and need to develop the comprehension strategies to successfully meet the reading demands of the core curriculum.	Instructional options such as additional courses are created to systematically and intensively teach learning strategies that students need to meet course demands. When core curriculum teachers notice students having difficulty learning and using strategies such as paraphrasing, they work with support personnel to provide more intensive instruction.	Special education and other support personnel learn how to provide intensive and explicit instruction, practice, and feedback in specific learning strategies and the process of strategic tutoring that shows students how to apply strategies as they complete assignments. Professional development focuses on helping teachers learn the strategies and course management competencies required to provide the intensive instruction required to ensure student mastery of learning strategies.

Figure 2: The Content Literacy Continuum—Continued

A Framework for Guiding the Development of Schoolwide Literacy Services in Secondary Schools

Level of Instruction	Teacher Actions	Example	Professional Competence
Level 4: Intensive Basic Skill Instruction. Goal: Students develop the foundational decoding, fluency, and comprehension skills associated with K3 literacy through specialized, direct, and intensive instruction.	Special education teachers, reading specialists, and speech-language pathologists team to develop intensive and coordinated instructional experiences designed to address several literacy deficits. Special education teachers and reading specialists will most likely deliver these services. They also assist content teachers in making appropriate adaptations in content instruction to accommodate severe literacy deficits. Intensive instruction in listening, speaking, and writing can also be part of these services. Services may be delivered in a pullout program, through the offering of a separate course, or through beyond-school programs.	The staff develops course options for support services that directly address deficits that cannot be addressed through less intensive efforts. Students still participate in the history class because the teacher is presenting content in ways that take into consideration literacy problems. Intensive research-based programs, such as The Corrective Reading Program, typically are chosen.	Special education teachers and reading specialists learn research-based approaches to implement programs that develop foundational literacy skills and strategies in students who read below a fourth-grade level.
Level 5: Therapeutic Intervention. Goal: Students with underlying language disorders learn the linguistic, related cognitive, metalinguistic, and metacognitive underpinnings they need to acquire content literacy skills and strategies.	Speech-language pathologists learn curriculum-relevant approaches to language therapy that interface with other intensive intervention provided to students. Speech-language pathologists and special education teachers learn to collaborate to provide coordinated and integrated services.	Students identified as language impaired may have difficulty learning The Paraphrasing Strategy. They may need support to provide more language-sensitive instruction or clinical intervention delivered by speech-language pathologists who can address the linguistic and metalinguistic underpinnings of the Paraphrasing Strategy (RAP) and the academic content.	Speech-language pathologists deliver curriculum-relevant language therapy in collaboration with special education and other support personnel who are teaching literacy. Speech-language pathologists collaborate with special education teachers to assist content teachers in making appropriate modifications or accommodations in content instruction to address the needs of students with language disorders. Speech-language pathologists work with special education teachers to help students with language disorders acquire learning strategies.

[Whereupon, at 4:35 p.m., the hearing was adjourned.]

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