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HOW DATA CAN BE USED TO INFORM EDUCATIONAL OUTCOMES

HEARING

BEFORE THE

COMMITTEE ON
EDUCATION AND LABOR

U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

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HOW DATA CAN BE USED TO INFORM EDUCATIONAL OUTCOMES

Wednesday, April 14, 2010

U.S. House of Representatives

Committee on Education and Labor

Washington, DC

The committee met, pursuant to call, at 10:01 a.m., in room 2175, Rayburn House Office Building, Hon. George Miller [chairman of the committee] presiding.

Present: Representatives Miller, Payne, Scott, Woolsey, Hinojosa, McCarthy, Tierney, Kucinich, Wu, Holt, Davis, Hirono, Altmire, Hare, Shea-Porter, Polis, Sablan, Titus, Chu, Kline, Petri, Biggert, McMorris Rodgers, Guthrie, Cassidy, Roe, and Thompson.

Staff present: Andra Belknap, Press Assistant; Calla Brown, Staff Assistant, Education; Jody Calemine, General Counsel; Jamie Fasteau, Senior Education Policy Advisor; Denise Forte, Director of Education Policy; David Hartzler, Systems Administrator; Fred Jones, Staff Assistant, Education; Kara Marchione, Education Policy Advisor; Sadie Marshall, Chief Clerk; Bryce McKibbon, Staff Assistant; Charmaine Mercer, Senior Education Policy Advisor; Alex Nock, Deputy Staff Director; Lillian Pace, Policy Advisor, Subcommittee on Early Childhood, Elementary and Secondary Education; Rachel Racusen, Communications Director; Meredith Regine, Junior Legislative Associate, Labor; Alexandria Ruiz, Staff Assistant; Melissa Salmanowitz, Press Secretary; Mark Zuckerman, Staff Director; Stephanie Arras, Legislative Assistant; James Bergeron, Deputy Director of Education and Human Services Policy; Kirk Boyle, General Counsel; Casey Buboltz, Coalitions and Member Services Coordinator; Barrett Karr, Staff Director; Alexa Marrero, Communications Director; Brian Newell, Press Secretary; Susan Ross, Director of Education and Human Resources Policy; Mandy Schaumburg, Education Policy Counsel; and Linda Stevens, Chief Clerk/Assistant to the General Counsel.

Chairman MILLER [presiding]. A quorum being present, the committee will come to order.

Good morning. Welcome to our witnesses and our members joining us here. Today we will explore how effective data systems can help improve educational outcomes. This is a part of a series of hearings this committee is holding as we work in a bipartisan way to reauthorize the Elementary and Secondary Education Act.

My colleagues have demonstrated their dedication to this bipartisan reauthorization process and all bring valuable expertise to the table.

Mr. Holt and Mrs. McCarthy particularly have been leaders in the data arena for several years. Notably, together they have previously introduced legislation to improve data use in schools across the nation.

Data is absolutely critical to education reform. Just like a successful company relies on sales reports to measure their success, schools need data to make informed and educated decisions about what is working and what isn't.

In many schools and districts, data is not used in the most meaningful way to make decisions, or even at all. It is unacceptable that education is only—the major enterprise in this country, on the whole, that doesn't use data to make decisions.

Teachers, parents, and school administrators and states need access to real-time information to know exactly how students are faring in school. We took a big step forward to address this need in the American Recovery and Reinvestment Act when we required states to comply with the four assurances in order to be eligible for the historic investment in education.

These assurances helped move the ball a little farther down the field for schools that are asking states to adopt college-and career-ready standards tied to better assessments, to turn around the lowest performing schools, and to ensure teacher talent that is distributed fairly and to establish data systems that use the data to improve schools.

We asked for these commitments from states, especially on the data front, for two reasons. One, we can no longer accept an education system that is willing to settle for less than the best of all of our students.

The millions of students in classrooms today are our future innovators and engineers. If we are going to regain our footing as a global competitor in the world, we need to demand the best of our students, our teachers and our schools.

And two, we need an effective longitudinal data system with focus on safety and privacy for our students that works to help schools succeed.

Schools need student-level information in order to better educate every child, both for their own benefit and for our future as a nation. In Western Heights school district in Oklahoma, for example, school officials use data systems to help determine which students are—were the lowest performing.

They realized that their mobile students, those who moved from school to school, were achieving at the lowest levels, and dropping out at the highest. After implementing the data system, the dropout rate in the district fell by 11 points in 2 years.

If districts implemented early warning indicator systems in middle schools, they could identify the students most likely to drop out of high school and reach those students before they get off track.

If a principal uses data to help identify teachers' strengths in the classroom, the principal could work to replicate those achievements on a school-wide level.

If researchers were able to investigate state-level data, they could share the practices that are working best to help students succeed.

Without data, schools are operating in the dark. Simply put, data systems work. That is why there has been a tremendous focus on data, in the next iteration of the Elementary and Secondary Education Act, the new law can be a real catalyst for positive change in our schools.

Since we announced we were working to rewrite ESEA, we have heard from thousands of stakeholders. Their input has been incredibly helpful. We all agree that the status quo is failing our children and won't lead our children to the future.

It is time we put the needs of our students and teachers at the top of our priorities. We can't let our students suffer the failures of a system that doesn't support them. We have an obligation to the children of this country to get it right the first time. That is why the data is so absolutely critical.

It is time to give teachers the tools they need to make data-based, informed decisions in the classroom. Critics of the use of data are operating under an antiquated school of thought. We have to take our schools to the future.

When data is properly presented and where people are given skills to use it and know the purpose behind it, data can be a most valuable tool to school success.

I want to thank in advance our witnesses for being here today and for their testimony that they will give in a moment.

At this time I would like to recognize Congressman Kline, the senior Republican on the committee.

[The statement of Mr. Miller follows:]

Prepared Statement of Hon. George Miller, Chairman, Committee on Education and Labor

Good morning.

Today we'll explore how effective data systems can help improve education outcomes.

This is a part of a series of hearings this committee is holding as we work in a bipartisan way to reauthorize the Elementary and Secondary Education Act.

My colleagues have demonstrated their dedication to this bipartisan reauthorization process and all bring valuable expertise to the table.

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Data is absolutely critical to education reform.

Just like any complex organization relies on multiple indicators to measure their success, schools need data to make informed and educated decisions about what is working and what isn't.

But in many schools and districts, data is not used in the most meaningful way to make decisions, or even at all.

It is unacceptable that education is the only major enterprise in this country that, on the whole, doesn't use data as to make decisions.

Teachers, parents, school administrators and states need access to real time data to know exactly how students are faring in school.

We took a big step forward to address this need in the American Recovery and Reinvestment Act when we required states to comply with four assurances in order to be eligible for the historic investments in education.

These assurances helped move the ball a little farther down the field for schools by asking states to adopt college and career ready standards tied to better assessments, turn around the lowest perform schools, ensure teacher talent is distributed fairly and establish data systems to use data to improve schools.

We asked for these commitments from states, especially on the data front, for two reasons.

One, we can no longer accept an education system that is willing to settle for less than the best for our students.

The millions of students in classrooms today are the future innovators and engineers.

If we are going to regain our footing as a global competitor in the world, we have to demand the best for our schools, our teachers and our schools.

And two, we know an effective longitudinal data system with a focus on the safety and privacy of our students works to help schools succeed.

Schools need student level information in order to better educate every child—both for their own benefit and for our future as a nation.

In the Western Heights school district in Oklahoma, for example, school officials used a data system to help determine which students were the lowest performing.

They realized their mobile students, those who moved from school to school, were achieving at the lowest levels and dropping out at the highest.

After implementing a data system, the dropout rate in the district fell by 11 points in two years.

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If a principal uses data to help identify teachers' strengths in the classroom, the principal could work to replicate their achievements on a school wide level.

If researchers were able to investigate state-level data, they could share the practices that are working best to help students succeed.

Without data, schools are operating in the dark. Simply put, data systems work.

That's why there has to be a tremendous focus on data in the next iteration of the Elementary and Secondary Education Act, so the new law can be a real catalyst for positive change in our schools.

Since we announced we were working to rewrite ESEA, we've heard from thousands of stakeholders. Their input has been incredibly helpful.

We all agree that the status quo is failing our children and won't lead our children to the future.

It's time we put the needs of our students and teachers at the top of our priorities.

We can't let our students suffer the failures of a system that doesn't support them.

We have an obligation to the children of this country to get it right the first time.

This is why data is so absolutely critical.

It's time we give teachers the tools they need to make data-based, informed decisions in the classrooms.

Critics of the use of data are operating under an antiquated school of thought. We have to take our schools to the future.

When data is properly presented and when people are given skills to use it and know the purpose behind it, data can be the most valuable tool for school success.

I'd like to thank our witnesses for being here today. I look forward to hearing your testimony.

Mr. KLINE. Thank you, Mr. Chairman.

Good morning to the witnesses and to all present. We are here this morning to examine how data can be used to inform educational outcomes. To be sure, educational data systems play an integral role in efforts to create more sophisticated academic performance measures. In other words, data help us understand how our students and their teachers are performing.

Yet no conversation about educational data systems would be complete without a discussion of student privacy. Technological advances and research opportunities have created a thirst for individualized student data like never before. Our commitment to privacy and data protection must intensify at the same pace.

Unfortunately, the research indicates not nearly enough is being done to safeguard our students' records. We will hear this morning from Professor Joel Reidenberg of the Center on Law and Information Policy at Fordham Law School—welcome, Professor—who has

been at the forefront in examining the privacy implications of longitudinal data systems.

These massive state-controlled databases collect personally identifiable information about schoolchildren, information designed to be interoperable among a variety of data systems, leaving open the possibility that this data could be mined for uses far beyond its intended purposes.

And, Mr. Chairman, I request unanimous consent to include Professor Reidenberg's report from October 2009.

Chairman MILLER. Without objection, it will be made part of the record of the hearing.

[The study, "Children's Educational Records and Privacy," dated October 28, 2009, may be accessed at the following Internet address:]

http://law.fordham.edu/assets/CLIP/CLIP—Report—Childrens—Privacy—Final.pdf

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Mr. KLINE. Thank you.

Professor Reidenberg will discuss his findings in detail, but there are two areas of concern I would like to highlight. First, the Fordham study found privacy protections lacking in most states. In some cases, states are not even complying with the federal educational rights and privacy act.

Second, the study highlighted the risk that individual state data systems could be sewn together to create a de facto national database, a massive federal collection of individuals student information that could include not just academic histories but sensitive personal data, including Social Security numbers, demographic and financial characteristics, discipline records and health or behavioral information.

The study describes it this way "Common data standards by definition facilitate the combination of multiple data sets into one national data warehouse of K-12 children, which in turn could be combined with data from post-secondary data systems to create an unprecedented national database of personal information."

The prospect of these data systems being used for more than academic tracking in grade school is hardly far-fetched. In fact, the American Recovery and Reinvestment Act, the stimulus bill, which we now know contained a host of provisions having nothing to do with job creation, included an additional $250 million for the existing state longitudinal data systems.

According to the U.S. Department of Education, the long-term goal of the program is to enable all states to create comprehensive P-20 systems which will track students from almost literally the cradle to their careers.

The emphasis on interoperability makes clear these systems are intended to link personal and academic information from elementary and secondary school to workforce data systems that attract—that track adults later in life. These vast collections of information could significantly undermine individual privacy, particularly if they are compromised through ineffective security measures.

In this era of technology and vast Web-based information archives, data that becomes public can never again truly be kept pri-

vate. The potential privacy cost of these data systems, particularly if they do not maintain proper safeguards, cannot be ignored.

Yet we must also consider the monetary costs associated with significant new data collection requirements. States and local school districts take on significant financial and personnel burdens to comply with data collection requirements.

At a time when local schools are seeking less red tape and fewer federal requirements, we must carefully weigh the potential benefits with these costs. The stimulus significantly expanded the scope of federal involvement in student data collection, the consequences of which are only just beginning to emerge.

I remain deeply concerned about student privacy both under current programs and in light of proposed expansions in data collection and use through reauthorization of the Elementary and Secondary Education Act.

I shared a number of these concerns in a letter to Secretary Duncan in February of this year, and I am eager to continue a dialogue about how individual privacy protection will be maintained and strengthened.

As I said at the outset, data systems are an important component of our efforts to measure and improve student academic achievement and teacher quality. Yet as technology advances, we must ensure the data collected is narrow in scope and tightly controlled with its use carefully monitored.

The more data collected, the greater the risk of exposure, which is why every effort must be made to bring privacy laws into the 21st century to protect the student information.

Thank you, Mr. Chairman. I yield back.

[The statement of Mr. Kline follows:]

Prepared Statement of Hon. John Kline, Senior Republican Member, Committee on Education and Labor

Thank you Chairman Miller. We're here this morning to examine how data can be used to inform educational outcomes. To be sure, educational data systems play an integral role in efforts to create more sophisticated academic performance measures. In other words, data help us understand how our students—and their teachers—are performing.

Yet no conversation about educational data systems would be complete without a discussion of student privacy. Technological advances and research opportunities have created a thirst for individualized student data like never before. Our commitment to privacy and data protection must intensify at the same pace.

Unfortunately, the research indicates not nearly enough is being done to safeguard our students' records. We'll hear this morning from Professor Joel Reidenberg (RIDE-en-berg) of the Center on Law and Information Policy at Fordham Law School, who has been at the forefront in examining the privacy implications of longitudinal data systems. These massive, state-controlled databases collect personally identifiable information about school children—information designed to be interoperable among a variety of data systems, leaving open the possibility that this data could be mined for uses far beyond its intended purposes.

Mr. Chairman, I request unanimous consent to include Professor Reidenberg's October 2009 report—entitled "Children's Educational Records and Privacy: A Study of Elementary and Secondary School Reporting Systems"—in the printed hearing record.

Professor Reidenberg will discuss his findings in detail, but there are two areas of concern I'd like to highlight. First, the Fordham study found privacy protections lacking in most states—in some cases, states are not even complying with the Federal Educational Rights and Privacy Act.

Second, the study highlighted the risk that individual state data systems could be sewn together to create a de facto national database—a massive federal collection of individual student information that could include not just academic histories but

sensitive personal data including social security numbers, demographic and financial characteristics, discipline records, and health or behavioral information. The study describes it this way: "Common data standards, by definition, facilitate the combination of multiple data sets into one national data warehouse of K-12 children, which in turn could be combined with data from post-secondary data systems to create an unprecedented national database of personal information."

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According to the U.S. Department of Education, the long-term goal of the program is to enable all states to create comprehensive P-20 systems, which will track students from almost literally the cradle to their careers. The emphasis on "interoperability" makes clear these systems are intended to link personal and academic information from elementary and secondary school to workforce data systems that track adults later in life.

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The potential privacy cost of these data systems—particularly if they do not maintain proper safeguards—cannot be ignored. Yet we must also consider the monetary costs associated with significant new data collection requirements.

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The stimulus significantly expanded the scope of federal involvement in student data collection, the consequences of which are only just beginning to emerge. I remain deeply concerned about student privacy, both under current programs and in light of proposed expansions in data collection and use through reauthorization of the Elementary and Secondary Education Act. I shared a number of these concerns in a letter to Secretary Duncan in February of this year, and I am eager to continue a dialogue about how individual privacy protections will be maintained and strengthened.

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The more data collected, the greater the risk of exposure—which is why every effort must be made to bring privacy laws into the 21st century to protect student information.

Thank you, and I yield back.

Chairman MILLER. I thank the gentleman, and I would like now to introduce the panel of witnesses for the hearing.

But without objection, I would first yield to the gentleman from Colorado, Mr. Polis, to briefly introduce our first witness, Richard Wenning.

Mr. POLIS. Thank you, Mr. Chairman.

It is really my honor to introduce Rich Wenning, who I got to know during my time on the state board of education and being involved with educational reform in Colorado.

Rich Wenning is currently the associate commissioner at the Colorado Department of Education, where he leads the Colorado Department of Education's public policy development and the design and implementation of Colorado's great educational accountability system and growth model, which we are going to be hearing about. He is the architect of the Colorado Growth Model.

Before he joined Colorado Department of Education, Mr. Wenning was vice president for quality and accountability at the

Colorado League of Charter Schools, where I had the opportunity to work with him in that capacity as well.

Mr. Wenning served as an executive on loan to the superintendent of Denver public schools, where he focused on strengthening the district's performance management practices.

Before Mr. Wenning moved to Colorado from Washington, D.C., he was president of the Education Performance Network, an affiliate of the New American Schools, not to be confused with the New America School, which is the charter school that I had founded and run prior to getting here, where he led a consulting practice focused on educational accountability systems and new school development.

Mr. Wenning also served as a senior policy advisor to the CEO of the D.C. public schools during the school district's takeover by the congressionally appointed D.C. Control Board. While at D.C. public schools, he headed the Office of Intergovernmental Affairs and Educational Accountability.

Prior to joining D.C. public schools, Mr. Wenning served as a clerk for the Senate Appropriations Subcommittee on the District of Columbia and as a staff member on the Senate Appropriations Subcommittee on Labor, Education and Health and Human Services.

Mr. Wenning began his career at the Government Accountability Office where he led research on accountability and equity issues as well as market-based education reform strategies.

And it is my honor to introduce Mr. Wenning to our Education and Labor Committee.

Yield back.

Chairman MILLER. Thank you very much.

Our next witness will be Mr. Kitchens, a superintendent of public schools for the last 15 years. Joe Kitchens is the national leader in the use of data systems to improve school achievement.

Mr. Kitchens was instrumental in developing longitudinal data that enables teachers to make immediate and effective decisions in the classroom. In 2008 the Data Quality Campaign recognized Mr. Kitchens as the district data leader of the year.

Katie Hartley is currently—teaches junior high math at Miami East Junior High in West Central Ohio. I am just trying to get my geography down here—in the analysis and the use of value-added data to make informed decisions concerning curriculum, instruction and academic programming.

Joel Reidenberg is a professor of law and founding academic director of the Center of Law and Information Policy at Fordham Law School. He is an expert on information technology law and policy. Professor Reidenberg examines information privacy and Internet regulation.

Professor Reidenberg has served as an advisor on data privacy, including special assistant to the attorney general for the state of Washington.

Welcome to all of you. Before we begin, let me explain the lighting system. When you begin a green light will go on. You will have 5 minutes to make your presentation. In fact, we are going to extend to you a couple of minutes because I know some of you are

also demonstrating the use of this information and you have got to pass a computer back and forth.

And then when the red light comes on, you can see that—in a coherent fashion, if you can bring your testimony to a close, we would appreciate it.

So, Mr. Wenning, we are going to begin with you. Welcome.

STATEMENT OF RICHARD WENNING, ASSOCIATE COMMISSIONER, COLORADO DEPARTMENT OF EDUCATION

Mr. WENNING. I think we are on now. There we go.

So, Mr. Chairman, members of the committee, thank you for inviting my testimony today on behalf of the Colorado Department of Education.

I would like to provide my remarks in the context of Colorado's effort to create an aligned state and federal accountability system that maximized the use of longitudinal data to support state and local performance management purposes.

Educational accountability systems include three basic components: rewards, sanctions and public reporting. Colorado's approach to educational accountability attempts to balance these components to promote local ownership of high-quality performance information.

Local ownership drives insight and action by users—students, parents, educators, administrators, business leaders, all members of the public. The key is fostering a common understanding among these stakeholders.

Colorado believes that the results we expect must start with the end in mind, and that is our statutory bright line principle of 100 percent of students becoming college-and career-ready by the time they graduate.

This universal goal clarifies our public responsibility and the focus of our accountability and performance management systems, and we are very pleased to see this principle in the president's blueprint for ESEA reauthorization.

Growth models like the Colorado Growth Model make it possible to establish ambitious growth expectations for every student, based on what they need to be on track, and roll this up for state and federal accountability purposes.

The clarity of the goal of readiness by exit, particularly in the context of common high standards, supports an essential, powerful and ongoing conversation between every student and his or her teacher and parents about how much growth the student is making and whether it is good enough.

Most important is a conversation about how each student, teacher and parent must work together to ensure that goals and standards are met. And I refer to the capacity to constructively engage in this fundamental conversation, using information effectively to make adjustments and achieve goals, as Performance Management Capacity.

This is the essential role of state longitudinal data systems. The key function: help parents constructively engage with educators and become knowledgeable choosers of schools.

The availability of outstanding instructional improvement and social collaboration technologies and incentives for using them, par-

ticularly through initiatives focusing on educator effectiveness, represent vital tools for bringing about breakthrough improvements in performance.

Thanks to advantageous timing—major advances in technology coinciding with Race to the Top—the nation is in a position to provide students and teachers the tools they need to achieve the results we expect. And we believe that we are primed to bring about breakthrough educator collaboration about performance and practice.

Underpinning this collaboration in Colorado is a new and public conversation about performance fostered by SchoolView and the Colorado Growth Model. SchoolView and the Colorado Growth Model are state-owned tools that run on open-source software, and we are happy to share them with other states at no cost.

We are pleased that several other states have already adopted our growth model, promoting cross-state collaboration and comparisons—Massachusetts, Indiana, Arizona, and I just learned that Wisconsin will be adopting the growth model as well that we have developed.

What I am going to do is just show you a quick demonstration of what the public has access to, and you have got screen shots of the password-protected version in my testimony. And of course, that is secure data that only educators have access to, but that does allow an educator to get down to an individual student and have a conversation with mom and dad about how a child's progress is doing.

The next key step is merging that with instructional resources so every teacher and student can be engaged in information about how each child is progressing.

I am going to quickly bring up two districts. First I want to orient you to the basic four quadrant diagram that we always use. We look at growth on the horizontal axis and achievement on the vertical axis, so that we can understand schools' performance in a simple manner.

I am going to pick Adams 14 School District, and then I am going to go ahead and pick Pueblo School District, and we are going to contrast two middle schools. Let me find Pueblo here.

And you have got the screen shots of this as well. I am going to go and hit—choose only middle schools. And this is a nice tool just to help benchmark performance.

The horizontal line in the middle reflects the average percent proficient or advanced in the state of Colorado. The vertical line is at 50th percentile growth. That is a year's growth in a year's time.

I am going to highlight two schools. As we can see, we have just highlighted Kearney Middle School with an enrollment of 470, a little bit below average in achievement, 44 percent proficient or advanced. Median growth percentile of 74—that means students at Kearney, the typical child here, makes as much progress or more than 74 percent of kids in Colorado with the same starting point.

Here, in a school that is a little bit above average in achievement, Corwin International Magnet School, the median growth percentile is 28, meaning the typical student in Corwin is only growing as well as 28 percent of the kids in Colorado with the same starting point.

Now we can go ahead in here—and this, of course, is all anonymous data at this point. We are going to disaggregate by other groups. And we can see that students eligible for free or reduced-price lunch are growing at a 29th growth percentile, meaning they are only doing as well as 29 percent of the kids in the state with the same starting point.

We go up a level and we can take a look at this school, which, again, would have lower achievement but much higher growth, and take a look at students in the other group category here, and we can see that for low-income students at Kearney, their growth percentile is 74.5, meaning they have got very high growth, making very high progress, even though in our current system of looking at AYP both of these schools would look the same, but we can see that there are dramatically different growth rates among them.

So you know, this kind of disclosure fosters a much more informed understanding of school and student performance, one that all of our stakeholders are becoming familiar with and interestingly, our educator associations are strong advocates of, because of the ability for teachers to understand what performance is like in different schools.

Federal policy can either support or hinder the understanding, ownership and effective use of performance information at the individual, local and state level through the metrics required and rewards and sanctions established.

As we reauthorize ESEA, it is critical that we get the federal, state and local roles right and give states sufficient latitude to build the performance capacity—the performance management capacity of stakeholders to achieve the breakthrough results that we need.

Incremental changes in this relationship in access to data won't even come close to the unprecedented productivity expectations we seek for public education in the United States as we aim to getting all students ready for college and career success.

Thank you, Mr. Chairman, members of the committee, and I will be, of course, happy to respond to any questions that you may have.

[The statement of Mr. Wenning follows:]

Prepared Statement of Richard J. Wenning, Associate Commissioner, Colorado Department of Education

Thank you for inviting my testimony on behalf of the Colorado Department of Education at today's hearing. I'd like to provide my remarks in the context of Colorado's effort to create an aligned state and federal accountability system focused on all students reaching college and career readiness by high school graduation.

How is Colorado refining its use of student performance data to improve accountability for student growth, better inform school improvement efforts, and more clearly communicate with the public?

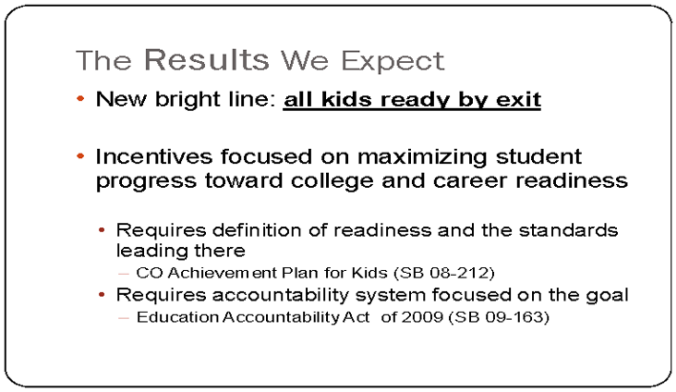
Educational accountability systems include three basic components: rewards, sanctions and public reporting. Colorado's approach to educational accountability attempts to balance these components to promote local ownership of high-quality performance information. We believe this local ownership drives insight and action by users: students, parents, educators, administrators, policymakers, business leaders, and the public-at-large.

Colorado believes that the results we expect must start with the end in mind: namely our statutory bright-line principle of all students becoming college- and career-ready by high school graduation. This universal goal clarifies our public responsibility and the focus of our accountability and performance management systems: we must maximize individual student academic growth toward the destination of

college and career readiness. We were very pleased to see this principle reflected in the President's Blueprint for ESEA Reauthorization.

However, the Blueprint's intended use of the 2020 date for school vs. state accountability is unclear. Colorado feels strongly that an arbitrary date certain is not helpful for states to calibrate their school accountability systems. This is because a very credible date exists for every student, namely their graduation date. Growth models make it possible to establish ambitious growth expectations for every student, based on what they need to be on track and also allow a roll up for state and federal accountability purposes. This concept is discussed further below.

The clarity of the goal of readiness by exit, particularly in the context of common high standards, supports an essential, powerful and ongoing conversation between every student and his or her teachers and parents about how much growth the student is making, whether it is good enough to catch up to proficiency (if the student is not proficient), keep up at proficiency (if the student is already proficient), or to move up to advanced levels of achievement. Most important is a conversation about how each student, teacher and parent must work together to ensure that the student meets goals and standards. I refer to the capacity to constructively engage in this fundamental conversation, using information effectively to make adjustments and achieve goals, as Performance Management Capacity. Plain and consistent language (like catch up and keep up) promotes meaningful conversations and illustrates the importance of focusing on the user of information when designing accountability systems.



The availability of outstanding instructional improvement and social collaboration technologies and incentives for using them (particularly through initiatives focusing on educator effectiveness) represent vital tools and opportunities for break-through performance improvements. Thanks to advantageous timing—major advances in technology coinciding with Race to the Top—the nation is in a position to provide students and educators the tools they need and deserve to achieve the outcomes we expect. We are primed to promote break-through educator collaboration about performance and practice. This is the essential role of state longitudinal data systems.

Key Catalysts for Performance

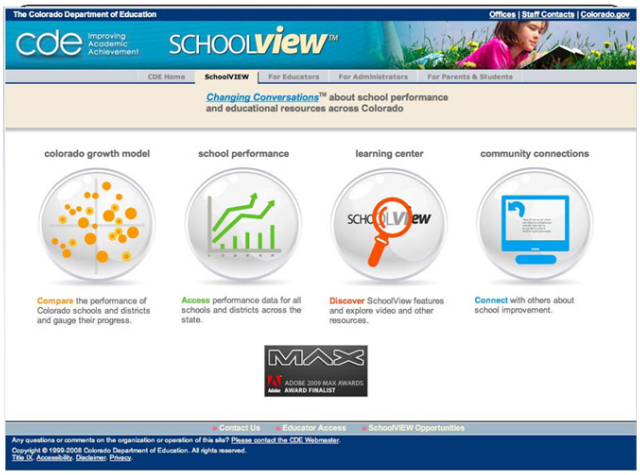
- Breakthrough educator collaboration about performance and practice
- Outstanding instructional improvement technologies drive insight and action by users at all levels
- Widespread understanding of performance motivates public pressure for sustained reform

Underpinning this collaboration in Colorado is a new and broad public conversation about performance fostered by SchoolView and the Colorado Growth Model (see figures below). SchoolView is a state-owned tool that we are happy to share with other states. The Colorado Growth Model uses an open-source methodology run on open-source software. We are making the display tools available at no cost to other states through a memorandum of understanding, including commitment to the Creative Commons intellectual property agreement we use.

SchoolView

Instructional Improvement System

- Access to Colorado Growth Model
- Hub for knowledge management
- Aligns accountability system's incentives and disclosure of results with information needs of each user
- Collaboration extends across states: Massachusetts, Arizona, and Indiana have adopted the Colorado Growth Model



The Colorado Growth Model was approved by the U.S. Department of Education for use in its growth model pilot. It uses a common measure to describe how much growth each student makes and how much growth is needed to reach state standards. In doing so, it provides a complete history of individual test scores for all students. The model depicts growth in a user-friendly and interactive display that provides clear information about student progress toward reaching state proficiency levels within a specific period of time.

The Colorado Growth Model supports a common understanding of how individual students and groups of students progress from year to year toward state performance standards based on where each student begins. The model focuses attention on measuring and maximizing student progress over time and reveals where, and among which students, the strongest growth is happening—and where it is not. It recognizes that the most effective schools are those that produce the highest sustained rates of student academic growth over time. Those schools may or may not be schools with the highest test scores every year.

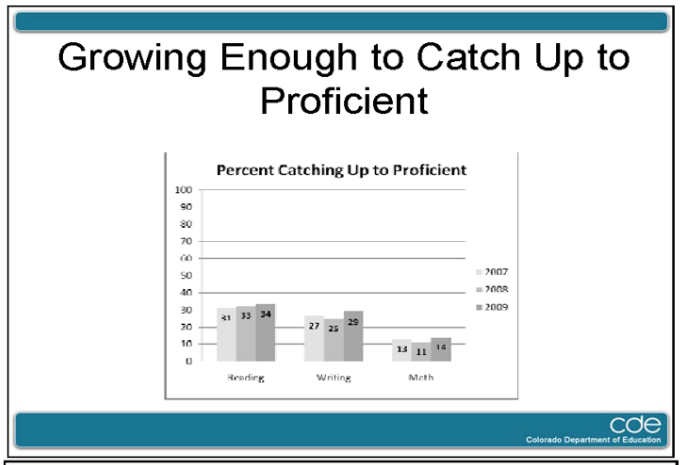
The Colorado Growth Model applies the common measure of Individual Student Growth Percentiles to school, district and state performance in a normative and criterion-referenced manner. The growth model provides a growth percentile ranging from 1 to 99 for every student—also described as "Low," "Typical" or "High"—and provides the percentile needed for a student to reach Partially Proficient, Proficient and Advanced levels within one, two, or three years.

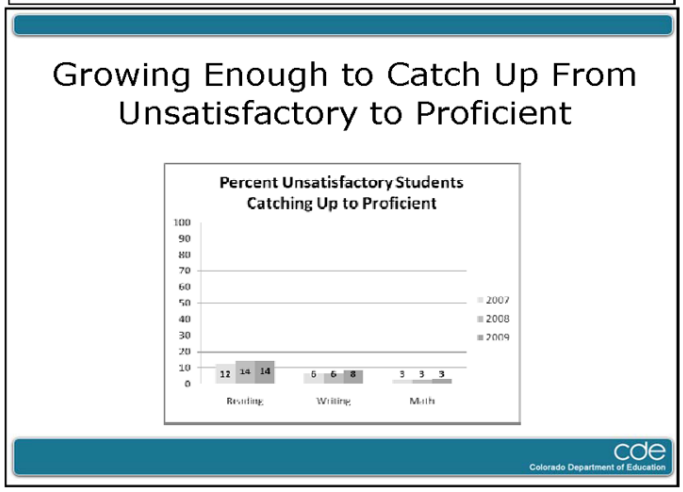
The model provides Median Growth Percentiles that are useful for benchmarking purposes and analysis of gaps in growth rates among groups of students. The overall

State Median Growth Percentile for every grade is 50, so it is useful to look for differences from the 50th percentile when benchmarking the growth of the typical student.

The model also provides information on the adequacy of growth to reach and maintain state-defined performance levels—we refer to these as Catch Up and Keep Up. On Track to Catch Up identifies students scoring Unsatisfactory or Partially Proficient in the prior year who achieved enough growth to reach Proficient within three years or by 10th grade. On Track to Keep Up identifies students already scoring Proficient or Advanced who achieved enough growth to stay at least Proficient over three years or until 10th grade.

The Colorado Growth Model fills an important gap in the current accountability system required by NCLB. To close the achievement gaps that plague our education system, we must eliminate gaps in how children are growing academically and ensure that our neediest students grow faster—more than a year's growth in a year's time—so that they catch up. The following graphics show the percentage of students achieving enough growth to catch up or keep up in Colorado.





Because AYP today is focused on each school's percentage of students who score "at proficiency" each year, it creates an overly anxious short-term focus on students "on the cusp" of proficiency—the ones who should be easiest to push over the hump and therefore give schools a better rating.

Instead, we should encourage teachers to focus on maximizing every child's progress toward ambitious standards—and developing every child to his or her full

potential—while encouraging schools to focus on long-term effectiveness. The federal accountability system should measure whether that is happening. As we measure the performance of schools and districts, we must provide individual student data that educators need in order to focus on improving student learning. Every educator and parent should know in plain language how much growth a child has achieved and how much growth each child needs to reach state standards.

Consistent with these design principles, the Colorado Department of Education used SchoolView to deploy a set of interactive Web-based display tools to provide Colorado Growth Model information about district, school and student performance to parents, educators and the public. (See images at end of document.) These display tools enable and promote new, well-informed conversations about learning among educators, students and parents while providing unprecedented public transparency in support of accountability, which allows us to disclose more, use fewer punitive labels, drive strong stakeholder buy-in, and foster sustained public pressure for reform.

Colorado is very interested in collaborating with other states to create a common data visualization platform to drive broad public understanding about educational effectiveness and cross-state performance benchmarking. We are pleased that Arizona and Indiana have elected to work with us on this effort. In addition, Massachusetts has adopted our growth model for its use. Several other states are expected to adopt it as well.

How can federal policy best promote improved student achievement?

Federal policy can promote dramatically improved student outcomes by ensuring a coherent accountability system focused squarely on building the performance management capacity of stakeholders. For this to happen, the federal role in local school management decisions must be redefined in a manner that recognizes and respects the essential role that states, local educational agencies, schools and individual educators must play if sustained high is to become the norm. Federal policy can either support or hinder the understanding, ownership, and effective use of performance information at the individual, local and state levels through the metrics required and rewards and sanctions established.

State education agencies (SEAs) play a critical role, and SEAs should be repurposed to support school effectiveness. This will require federal support. SEAs must become reliable providers and brokers of high-quality support and service to schools and districts. They must focus on sustaining continuous improvement in schools and districts while also ensuring that they meet compliance obligations. To achieve this aim, SEAs will need to invest in research and development, program evaluation, and diagnostic school and district reviews focused on improvement efforts. This may require reallocation of resources. SEAs will also need to develop coherent knowledge management strategies to sustain their capacity levels.

Flexibility is also necessary. Expanding allowable uses of funds would allow SEAs to invest in capacity-building strategies to deliver ambitious, desired results. ESEA reauthorization should extend far greater leeway in the use of federal funds at the state and local levels, but only to those SEAs that adopt high-quality accountability systems based on internationally benchmarked standards for college and career readiness. Incorporating these expectations into the reauthorization of ESEA will go far in ensuring students are truly prepared for college or rewarding careers.

Provide Flexibility in Identifying Low-Performing Schools for Intervention

In reauthorizing ESEA, Congress should be cautious in prescribing the details of how to identify the bottom five percent of schools based on achievement and growth. Some flexibility is needed so that states can calibrate accountability systems to meet the performance improvement needs of their particular schools and districts. The essential condition is that states must have a credible approach and rationale and be publicly transparent in how they do this. For states without an approved accountability system designed to identify the bottom five percent, ESEA could contain a default approach.

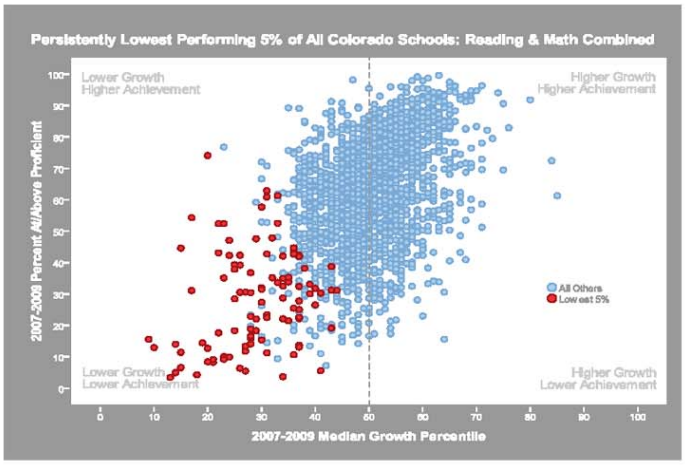
For example, there are more chronically low-performing schools in Colorado than we can effectively intervene in with federal School Improvement Grant [1003(g)] resources. (See figures below.) As we prioritize schools for intervention, we would like to consider persistence and severity of need and whether the intervention fits the problem and can have a scalable impact. Also, to help ensure success, we need to engage communities to understand and support the change. Uncertainty about who is on the "federal list" vs. the "state list" has been unhelpful and has set back our efforts to take on our lowest-performing schools.

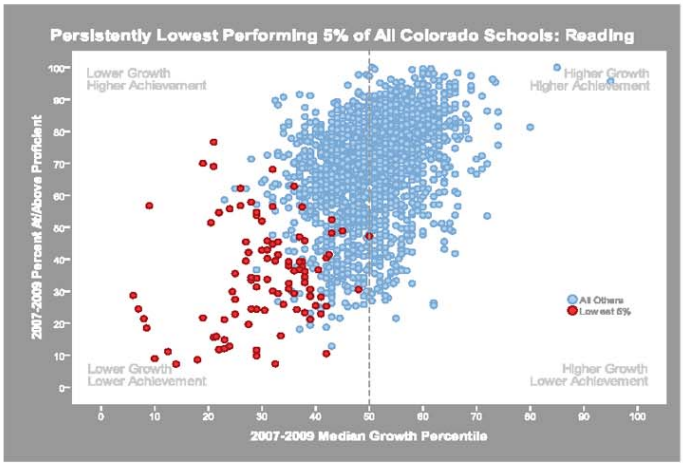
To illustrate, consider two hypothetical low-performing schools. One is a high-poverty, chronically underperforming high school with 1,000 students and the other is a high-poverty, 50-student alternative education school with 20 continuously en-

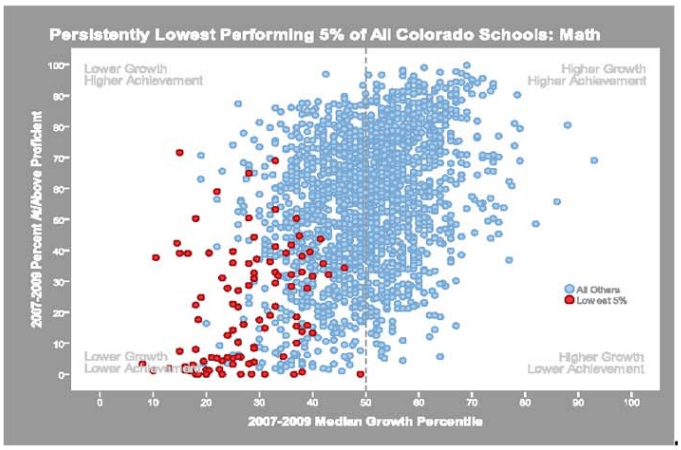
rolled students from one year to the next. The alternative school focuses on students who have been incarcerated or have drug treatment needs and helps transition kids back to regular high school or helps students earn GEDs. Many of these very students have experienced failure and disengagement at the comprehensive high school. Both schools are persistently low-performing, but the large high school is a few schools higher in the rankings and thus doesn't make it on the "Tier 2" list. However, its poor performance is a direct cause of the need for the alternative school, now targeted for turnaround.

Colorado would like discretion to determine which school to serve—to attack root causes rather than symptoms. The large high school is a good fit for turnaround. The alternative school is not. Forcing a leadership change at the alternative school could have a negative impact on student engagement and the school is doing about as well as other alternative schools. Without a doubt, we need to take on improvements in our alternative schools. However, state ownership and discretion are critical when we determine where to invest scarce resources in order to increase the supply of high-performing schools, to reach the largest number of students and maximize positive impact.

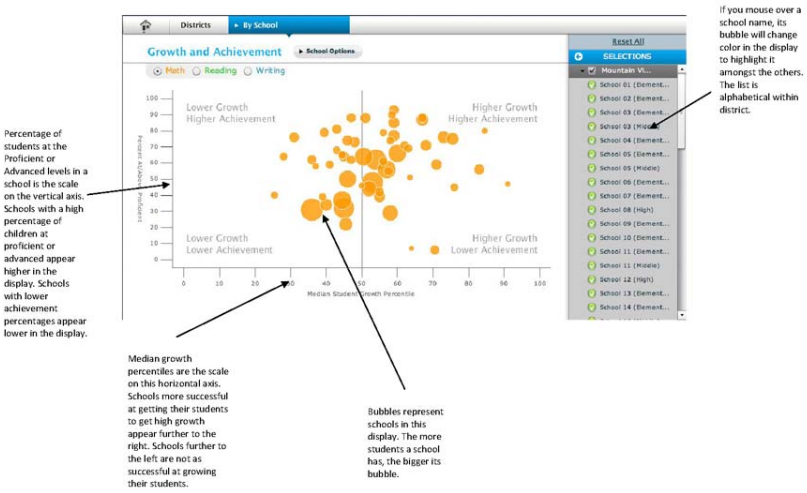
Conclusions on which schools constitute the bottom five percent depend on the particular analytical lens one uses to identify schools for intervention. Consider the following graphics. The first graphic shows the lowest-performing five percent of schools in Colorado based on standardized growth and achievement data (growth weighted 2:1) over a combined three-year period across reading and math. The second and third graphics show the same schools highlighted by subject area. The axes reflect combined three-year student median growth rates and percentages proficient or advanced. While the first graphic suggests a tight cluster of low-performing schools, the other graphics show the variability of performance by subject area. The point here is that there is not just one way to identify the lowest five percent. Performance profiles vary by elementary, middle and high school levels. Some schools perform better in one subject or the other. ESEA should leave room for state discretion in making these determinations.

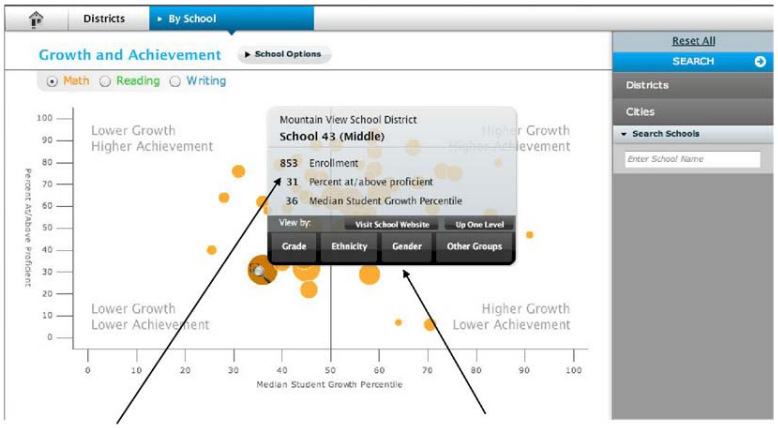

Persistently Lowest Performing 5% of All Colorado Schools: Reading & Math Combined
Lower Growth
Higher Achievement
Higher Growth
Higher Achievement
Lower Growth
Lower Achievement
Higher Growth
Lower Achievement
All Others
Lowest 5%
2007-2009 Percent At/Above Proficient
2007-2009 Median Growth Percentile


Persistently Lowest Performing 5% of All Colorado Schools: Reading
Lower Growth
Higher Achievement
Higher Growth
Higher Achievement
Lower Growth
Lower Achievement
Higher Growth
Lower Achievement
All Others
Lowest 5%
2007-2009 Percent At/Above Proficient
2007-2009 Median Growth Percentile


Persistently Lowest Performing 5% of All Colorado Schools: Math
Lower Growth
Higher Achievement
Higher Growth
Higher Achievement
Lower Growth
Higher Growth
Lower Achievement
All Others
Lowest 5%
2007-2009 Percent At/Above Proficient
2007-2009 Median Growth Percentile

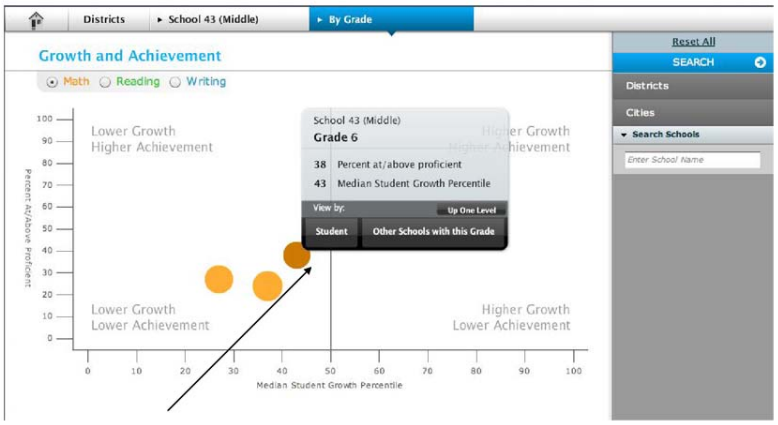
This is the basic view, showing all schools in the district that you have data access to. This is called a bubble chart, where schools are represented by bubbles.





Mousing over a bubble makes a popup window for that school appear. In it you will find total school enrollment (NOT number of students who have growth percentiles); the percentage of kids at or above proficient in this subject area across all grades in the school; and the school's median growth percentile for that subject area.

This popup window is also your primary means of navigating in the interface, and especially for drilling down into the student level of data. To get to the student-level data, you have to choose Grade in this box. If you choose any of these options, the display will change. Other schools' bubbles will disappear, and bubbles representing the levels of the variable you have selected will appear. For example, choosing Gender will cause two new bubbles to appear: one for boys and one for girls, just for the school you selected.

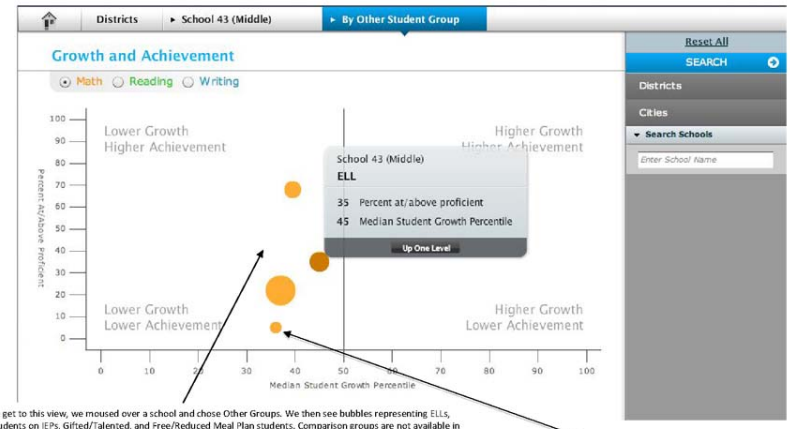


Mousing over a particular grade bubble within a school will allow you to explore individual-level data for this school. You just mouse over a grade and choose "Student." If you choose "Other Schools with this Grade" you will get the view shown on the next page instead.

This view shows all the grade 6s in the district. In other words, each bubble represents the growth and achievement for the 6th graders in all schools in the district that have this grade. This enables a viewer to see what schools in the district are doing the best and the worst with their sixth-graders, in this case.

When you are only looking at elementary, middle or high schools separately, or in this case one particular grade across the district, a colored horizontal line appears in the display. This line represents the state average achievement level for all kids in this level of school. How is this calculated? Each elementary, middle or high school has a particular percentage of its students at the Proficient of Advanced level. If you average all the percentages together from all schools in the state, you get one number: the state proficiency average. This number gives you a reference point for understanding where a school stands in relation to the state. Bubbles above the colored line are doing better than the rest of the state in their "status," or percentage of kids who are proficient or advanced.

The colored horizontal line tells you the state average for the level of proficiency. The vertical line, on the other hand, tells you the state median (like an average) for growth. Bubbles that appear to the left of this line are showing lower growth; those that appear to the right of the 50th percentile line are showing higher growth. The further away from the line a bubble is, the lower or higher its growth relative to the state as a whole.

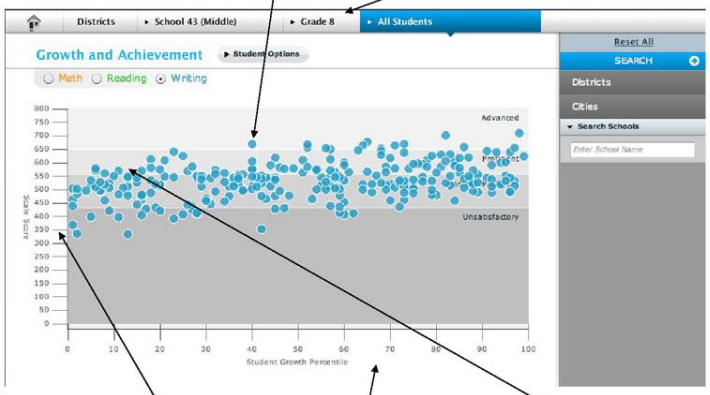


To get to this view, we moused over a school and chose Other Groups. We then see bubbles representing ELLs, students on IEPs, Gifted/Talented, and Free/Reduced Meal Plan students. Comparison groups are not available in this version of the Colorado Growth Model, so you cannot compare your ELL students to your non-ELL students in a simple way.

The horizontal and vertical axes are still the same, so your interpretations of the bubble locations are the same as before, telling you both about achievement level and growth. You can mouse over these bubbles, but you cannot break them down further. To go back to the whole school bubble, choose Up One Level in the popup.

Small bubbles in the data plots might represent a group that has very few members, so be careful not to over-interpret them.

This is the first student-level view. Bubbles do not represent groups of students here- they represent individual children. You can see this by mousing over a bubble, and the name of the student will appear. You can keep track of what school and grade you're looking by looking at the information in the popup window for a student, or by looking at the crumbtrail. In this case we're looking at all the 8th grade students in School 43.

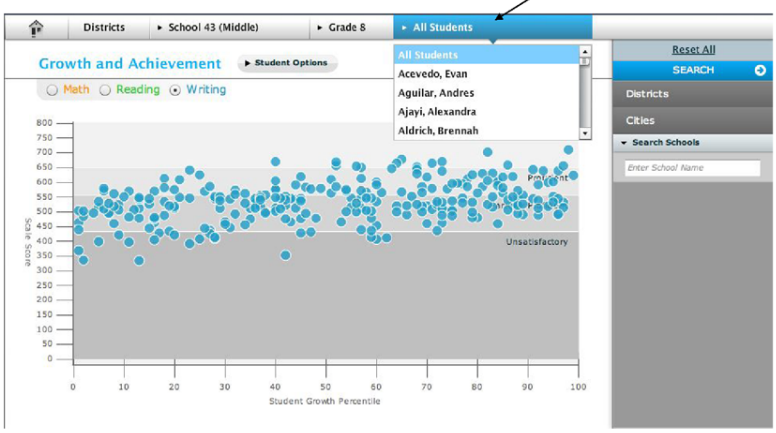


This vertical axis has changed. These numbers are actual scores obtained on this CSAP writing assessment. You can see where the cut scores for the different achievement levels are for 8th grade students in writing by following the thin white lines marking the divisions between the shaded regions all the way to the left. The student with the highest scores are on the top part of this data plot, going all the way across from left to right.

The horizontal axis has changed a little bit in this student-level view; we are still looking at student growth percentiles, but these are individual growth percentiles, not medians for groups of students. The scale is still the same (1-99) and it still has the same meaning (further to the right is higher growth).

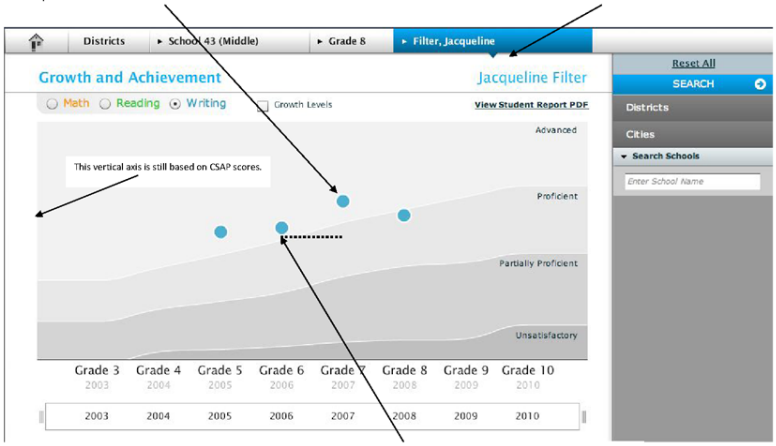
If you only are interested in knowing which students have lower growth, you'd focus on the bubbles on the left-hand side of this data plot.

We are looking at all 8th grade students in School 43 right now. If you are looking for a particular student, use the alphabetical list that drops down when you choose the All Students button here. This is much faster than mousing over bubbles to search for someone without knowing where they are. The display will then change to show only that student's data.

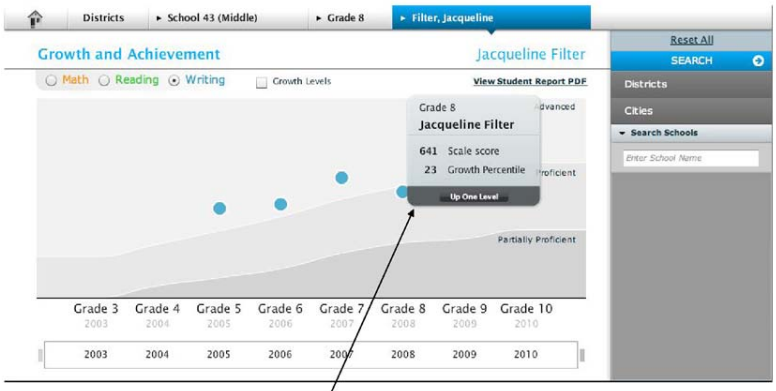


This is the deepest view available in the Colorado Growth Model. Bubbles represent test scores from a particular year (**not** children, groups of children, or schools as before). This view is the student's CSAP score history. You can see how a child scored in past years, as well as in the most recent year. You can easily see what achievement level a child's score placed him or her into. This student is in the Advanced level.

You can see the CSAP score history for other students from the same grade and school by browsing through the alphabetical list here. The application remembers that you want to look at CSAP Writing data.



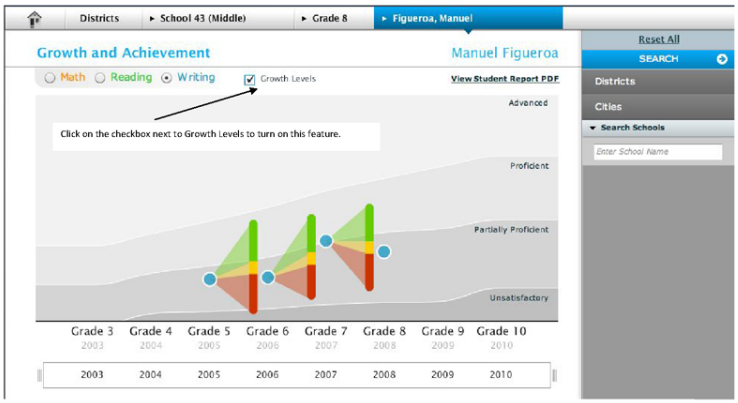
The shaded regions change level every year, because the score you need to be placed into a particular achievement level (such as Advanced) goes up every year. For example, a sixth-grader who gets a 601 on the Writing assessment is considered Advanced, but this same score in seventh grade is not high enough to get you into the Advanced level anymore, as shown by the level dotted line. The values on the vertical axis are the same every year, but the achievement level cut scores change, becoming higher for every higher grade.



So where is the growth information for this student? Remember, a student growth percentile is a measure of how much growth a student made from one test to the next. **Mouse over any bubble** that has at least one other bubble to its left, and a popup window will display the Growth Percentile reflecting the amount of growth from the previous bubble to the one you're on. In this case, we are mousing over the student's grade 8 bubble. The popup window reveals the test score for that year and content area (Writing grade 8 in this case), and a student growth percentile of 23, representing her growth, or academic progress, from grade 7 to 8. 23 is not a very high amount of growth, and it looks like that low amount of academic progress caused this student to move down from Advanced to Proficient in Writing in just one year.

You could also mouse over this student's grade 7 or grade 6 bubbles for those years' growth percentiles. Mousing over her grade 5 score would produce a popup window with her CSAP Writing score from that year, but no growth percentile, because 2005 was apparently the first year that she took the CSAP Writing assessment in Colorado. Growth scores can only be calculated when a student has two test scores in the same subject area, in consecutive years, and in a normal grade progression.

You can click on this link to connect to CDE's servers and download an individual student growth and achievement report for this student. This is a two-page pdf that appears in a separate browser window on your computer. It has growth and score levels for this student for all CSAP content areas, and is made to be printed or copied for use by students, parents, and teachers.



These "growth fans" tell us where different levels of growth for this student would have put this person into different achievement levels in past years. Green represents various levels of high growth, from 66-99th percentile growth. Typical growth is in the range from 36-65, and low growth is 1-35. In this example, Manuel's 7th grade score put him just barely into the Proficient achievement level. As you can see, if he only achieves typical levels of growth in the following year, that would land him back down in the Partially Proficient category (based on where growth in the yellow portion of the fan would put his test score in the following year). Manuel needed to achieve pretty high growth to stay above the borderline between Partially Proficient and Proficient, because that borderline area is covered by the green portion of the growth fan. As you can see from his 8th grade test score bubble, he unfortunately dropped down a level. His 8th grade bubble is down in the Partially Proficient category. It looks like he only got 40th or so percentile growth, and that dropped him down to a lower achievement level. Typical growth was not enough for him to remain Proficient.

Chairman MILLER. Thank you very much.

Mr. Kitchens? You need your microphone.

STATEMENT OF JOE KITCHENS, ED.D, SUPERINTENDENT OF SCHOOLS, WESTERN HEIGHTS SCHOOLS

Mr. KITCHENS. Yes. Okay. Got it?

Chairman MILLER. Is the green light on? Yes, I think you are on.

Mr. KITCHENS. Yes.

Chairman MILLER. Thank you.

Mr. KITCHENS. Thank you very much.

It is indeed an honor to be here today, and I have my trusted assistant, Dr. Lisa McLaughlin, with me today, and she drives the boat here, so to speak.

I wanted to start with a picture. You know, a picture sometimes can tell a thousand words, and so we have a picture that we would like to show the committee, and this is a picture of our graduation last year.

And this is the way it has been for the last 5 years at Western Heights schools in Oklahoma City. Every year in a message of accountability we go to our people and we say, "This is a cohort of students that we enrolled in the ninth grade, and this is how many of that cohort dropped out, and this is how many of that cohort graduated, and this is how many of that cohort that we totally impacted and served."

And the message is simple, I think, in America right now. This is not the same country as when I was growing up in the 1960s. I entered the ninth grade. I knew who I would graduate with. I understood that. Now it is not quite that way.

In this particular diagram, every year we lose—or every 4 years we lose 45 percent of our students, Mr. Chairman. We have to do something about this. We have to retool America's schools to deal with this issue of mobility.

And so if you come to our school district this year, I promise you this will be the way it will be, and we will tell in the most serious way of accountability how things are going with our public school.

If we can go forward, at Western Heights, we, too, operate and give our public an understanding of what is going on with our school system. We use an enterprise model. We want to show the performance of every student and every teacher's classroom, and we practice what we call managed access for privacy control.

That is, the teachers used records of her students and her students only. Parent use the records of her family, their family, only. Principal views records of students in the site only. And it took us a while to get to that point, but that is where we are.

So we are going to go forward, and we are going to go directly into our network right now, live, and we will show you a student's record that we have permission to show, and—if we didn't lose our login. We are going to have to log in right quick and catch the student record. Timed out on us.

And as I said, we maintain total control, managed access control, of the record. If the status of a family changes, Mr. Chairman, we have automated controls that shut down access to the family record. And that way, we are protecting the privacy of individuals.

And we need to come on down to the student record, Mr. Anderson. Okay. And now you see the record. And this is real-time access of data. So we are going to look at Sean's enrollment, and it is not just real time. It is historical data.

So let's look at current enrollment. Let's look at all enrollment. That is the current enrollment status, and he has been enrolled with us for 6 or 7 years, so we have historical data. One of the critical things about data in America is to—in the schools is to have access to historical data.

Let's look at schedule data. This is not something that you will normally see. And this is a current schedule. This is live data of Sean's current schedule, but in historical terms, let's look at Sean's schedule for the last 3 years.

So for the past 3 years, we have been able to pull up historical schedules. If you wanted an electronic transcript, this is the way it would have to work. That is year seven. Let's get year eight. So, year nine data. Okay. Go back up. Go get year eight data. That is year nine. Okay. So you can see that we are moving back and forth in schedules over time.

So let's go to attendance information. So we are gathering all of this information on the child, and we are going to get daily attendance right now, today. And if you could, let's just get it for the year, full year. And there it is. And if you want historical data, we can go back in time and pull it for 3 or 4 years, every year. Okay.

Let's offer the grades, the current grades. And as I said, the mother signed a release and understands how this is being used. And there are the grades. And let's look at the assessment information. Okay. Let's look at results on assessments. And let's look at the ACT plan. And here is the data on the plan.

Let's go back. Let's look at a state test. The EOIs—these are state tests. And you are actually seeing how the record can pull up. Let's get it. And Algebra I assessment—we can go back. We can hit another assessment.

And every assessment that the district gives is now available to the teacher, and the teacher of record only. And this allows us to move in and out, okay.

Now, at "other"—and this is what I call a cross boundary—we are actually pulling data from the child nutrition system into the system. And so we have what we call cross-boundary transformation of data, twelve disparate data systems working simultaneously in managed access. The only reason anybody here is able to see this today is because this parent has signed off to let that happen. We can shut that down, okay.

And let's go in at that point. Now, I would say to the people here in D.C., to our government, it is time to deal with mobility. You know, we have to do this on behalf of our children.

This is not the same society as we had 25, 30, 40 years ago in the sense of we have people on the move. And we need to move data with children so we can make informed decisions about their educational lives.

Thank you.

[The statement of Mr. Kitchens follows:]

Prepared Statement of Joe Kitchens, Superintendent, Western Heights School District, Oklahoma City, OK

We live in a world where rapid advances in technology are commonplace, and leveraging technology to improve productivity is expected. With the passage of The American Recovery and Reinvestment Act (ARRA) of 2009, there now exists a "once-in-a-lifetime" opportunity to realize dramatic leaps in educational improvement to prepare our children for the future. According to the Data Quality Campaign (DQC, 2010), "the education sector is on the cusp of becoming an information-based enterprise." It follows that the development of enterprise-based data systems are essential for the nation's educational progress.

A true enterprise-based system always has, as its focus, the "product" to be produced. In an education-based enterprise environment, the "product" is student success. An effective education—based enterprise system provides for the creation, storage and use of data from multiple disparate sources. Diverse data collection, combined with the application of effective rules for data management, means that enterprise-based educational systems hold great promise for impacting the school improvement process in a positive manner. Educators at all levels, from local classrooms to district offices to state and federal education agencies, must recognize that true school improvement—the type that is lasting and meaningful—will occur only when school systems and agencies are simultaneously supported via interdependent, classroom-driven longitudinal data systems that provide near real-time, appropriately aggregated/disaggregated data to students, teachers, parents and other stakeholders, including state and federal agencies.

The evolution of effective enterprise-based education systems will determine whether districts and states will actually be able to create huge improvements in success that these times demand. School improvement must become dynamic, where success is emulated and failure is eliminated. Such effective classroom-based, enterprise-oriented longitudinal data systems can be empowered through the use of emerging technologies (with protection of private data via managed access), so that stakeholders at all levels may better understand the real-time impact of success and failure in our nation's classrooms.

Enterprise-based Longitudinal Data Systems

So, where do we begin? The classroom, of course! There are many educational issues to consider:

- While enterprise systems should be designed to support "any time, any place" learning, where does the majority of student learning occur at this time? Answer: in the classroom.

• Where do teachers and students most commonly interact in support of learning activities? Answer: in the classroom.

• At a minimum, where should educators strive to develop an immediate impact on student learning? Answer: It all begins in the classroom.

• Who can most effectively impact student learning? Answer: the teacher.

• Who among us can best influence students to achieve their potential? Answer: teachers, peers, parents, and mentors—those typically engaged in student support activities.

All education initiatives should be challenged as to what value-add they will bring to the nation's students. It only makes sense that real and effective investment in the national education system must be initiated and measured in terms of individual student growth. Effective learning is personal, sometimes complex and always best supported by quality data analysis that informs instruction on a continuous, near real-time basis. It makes "BIG" sense that statewide longitudinal data systems (SLDS) and their continuous management be inexorably and effectively linked to America's classrooms. Real school improvement in America is contingent on the simultaneous development of seamless, enterprise-based longitudinal data systems at classroom, site, district and state levels across the nation that is reflected back to the enterprise system product—in this case, student success.

The United States Department of Education (USDOE) has supported the creation and deployment of SLDS/enterprise-based initiatives in almost all of the states. These efforts need to be integrated and become a very critical aspect of educational improvement activities in all of America's schools. It is crucial that Americans have confidence that public education programs are in fact improving. When there are problems in schools, the public must know that those problems will be successfully addressed. This presents the case for enterprise-based, multi-level school management systems within a state's existing infrastructure. In principle, real school improvement activities must originate at the individual student level. Growth modeling of individual student success over time is absolutely the most valuable tool that local administrators can provide to students, their parents and teachers. If the development and deployment of SLDS architecture continues from a "top-down" perspective without effective evidence of coordinated linkage of student data over time, then how can these efforts ever establish a definitive value-add for instruction?

The Impact

For the future of education, the importance of developing enterprise-based SLDS solutions is immense. It is the only way to address the issue of high student mobility that currently exists and will continue to increase. Our cohort-driven statistical analyses indicate that the nation may be missing the opportunity to effectively and appropriately educate a large segment of our country's student population (i.e., the mobile students). Some of our findings indicate that mobile students fail academically and drop out of school at twice the rate as non-mobile students. Enterprise-based systems which can support the distribution of near real-time, high-value data that informs instruction are absolutely essential in addressing the mobility problems of America's students. Our data indicates that, over a four year period, more than 50% of our secondary students are mobile. In some districts across the country, the numbers may be much higher. There is no solace to be gained—rather, great danger exists—when districts or states report that non-mobile students are succeeding academically while the plight of mobile children is ignored.

The investment of millions of dollars in longitudinal data analysis should assist the USDOE and state educational agencies (SEAs) to become more accountable to the American public. However, there are other compelling reasons to use enterprise-based longitudinal data systems, such as establishing near real-time instructional need, and assisting in the delivery of timely instructional supports at the classroom level while creating and distributing student growth model analyses that validate instructional efforts.

Suggested Actions

The Council of Chief State School Officers (CCSSO) and most states have worked to create their own versions of learning standards. Attempts to update learning standards, whether at the federal or state levels, must continue as the scope of knowledge grows. As long as learning standards are modified and assessments are revised, there will always be a need to "bridge the gap" between the "old" and the "new" standards. We cannot afford to rebuild our education system every time learning standards change. There is a critical need in education to establish a common language that simultaneously and definitively describes the scope (what we teach) and methodology (how we teach) of past, current, and proposed instructional efforts at every level. In successful, enterprise-based solutions within corporate envi-

ronments, the establishment of a "common vocabulary" is recognized and highly valued. We must proactively establish flexible and definitive descriptors of what we will teach our students and then map this common vocabulary to all valued state and national standards of instruction. This process of "setting standards for standards" could greatly improve the flexibility, efficiency and effectiveness of America's school systems, especially for mobile students. Such an effort in the basic core of curriculum needs to be, at a minimum, a PreK-16 effort to support the transition of students at all educational levels.

In most successful companies within the corporate world, when a new vocabulary is introduced, it requires the development and adoption of new "business processes" that will provide new capacities to create, store, and use data more productively. These new business processes also require a review of data transmission at every level of functional operations. Since there currently is a heightened interest at the federal and state levels to collect academic performance data in the aggregate, and since there is an associated need for school districts/sites to develop academic performance measures at the student level, there should be a concerted effort to study and develop new "rules" for enterprise-based management of educational data.

In summary, it must be noted that the deployment of effective enterprise-based, longitudinal data systems is not widely evident in America's schools. Efforts to improve the transparency of the nation's school systems are dependent on the establishment of enterprise-based longitudinal data systems. Furthermore, other issues such as quality control, performance-based pay, and professional development are dependent on the establishment of enterprise-based longitudinal data systems at every level of education, including the classroom and student levels.

REFERENCE

Data Quality Campaign (DQC), 2010. 2009-10 Progress Report on State Data Systems and Use. Washington, DC: www.DataQualityCampaign.org

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Chairman MILLER. Thank you.

Ms. Hartley, welcome. I think we are going to—are we passing the computer down, Ms.—watch out there, now. We are going to have water and coffee and computers all over the place.

STATEMENT OF KATIE HARTLEY, M.ED., JUNIOR HIGH MATH TEACHER AND VALUE ADDED SPECIALIST, MIAMI EAST LOCAL SCHOOLS

Ms. HARTLEY. Good morning.

Chairman MILLER. Good morning.

Ms. HARTLEY. Thank you for the opportunity to speak. My name is Katie Hartley and I teach—I currently teach middle school math at Miami East Local School in West Central Ohio. I am also the district's value-added specialist, and I am also a regional value-added specialist for the western region of Ohio.

A nonprofit organization called Battelle for Kids brought this thing called value-added data to Ohio in 2002, and the superintendent we had at the time had the foresight to get us involved in the program. I was selected to be trained as a value-added specialist.

And so as both—I am here today to speak to you both as a teacher who has used value-added data to inform decisions in my classroom and also as a value-added specialist who has worked with other groups of teachers to improve their practices.

Value added data, at the very basic level, is a way to measure how much students grow in a year's time. It is the data analysis that takes a student's test history and test history of students like that child and they use all of this information to make a prediction for how a student should score on an assessment at the end of a school year.

And then we compare that prediction with how the child actually does, and the difference between how the child should score and how they actually score, then, is attributed to teacher-and school-level decisions. So in a way, it is a means to measure the effectiveness of a teacher and of a school.

At Miami East, we have used these data, like I said, for the last 8 years. We have used some with different groups of teachers. And I am very proud to say that for the last 2 years we have achieved the "excellent with distinction" rating from the state of Ohio, which is the highest level schools and districts can receive.

You receive that rank by not only showing high achievement scores, graduation rates, attendance rates with our students, but also by showing positive growth scores, high value-added scores, for our students.

I would like to go ahead and show you live some reports that we are able to use in Ohio. You can see from here that the EVOS report access has two different logins. There is the public-level access, which I am going to show you, and then there is an educator login.

That is a role-based access. In other words, district leaders have access to district data. School leaders have access to school data. And teachers have access to teacher-level data. At this time in Ohio, parents do not have access to their individual child's value-added data on the state system. That is up to districts to decide how that is disseminated to parents.

So we can scroll through every district in Ohio. And we can automatically see a report here, and this is for Miami schools' reading value-added scores. It is a very basic evaluation of growth scores for students in our school district.

The analysis starts in grade four, and the intuitive nature of the green, yellow, red—green obviously means that students in those grade levels in reading made more than a year's growth. They had high value-added scores. Yellow would mean that they were close to making a year's worth of growth. And then the red would be areas where students did not make a year's worth of growth in that subject.

And this is also historical. We can look at data from 2007, 2008 and 2009. We can look at not just how did our students perform last year but how have they over time performed in this subject at this grade level. And then there is a 3-year average here.

I can go back up here to the top, and I can choose, instead of reading, math. In Ohio, under the Ohio system, we only do value-added measures at the state level for reading and math. Districts do have the option to be enrolled in a project called Project SCORE, which Miami is in, that gives additional value-added data for science and social studies. It also gives scores for third graders, which the state does not give, and then it also—we have a high school pilot.

But we can see this is now math. We were looking at reading before. Now we are looking at some math value-added scores for Miami East, again by grade level and by year. So we can see that over time our fourth grade math students are doing a—making tremendous gains.

In fifth grade math, we have gone from a green to a yellow to a red, so as a fifth grade teacher or as a principal of that building, you know, we need to think about what are the—what has been happening in fifth grade math that has led to these changes over time.

Sixth grade math, we are green. Then we drop down to yellow but jump back up to green. So we made some adjustments there. And so you can see from this, we can, as a school and as teachers, look at how our students have grown and make decisions about how we are teaching, what we are teaching, and what we can do differently to impact that.

I unfortunately don't have a visual for this, because it contains student-level data, but I would like to give an example—I taught fifth grade math. This was probably about 6 years ago. And one of the pieces of information that teachers receive is a disaggregated report—in other words, it tells us how we grew our top achieving kids and our bottom achieving kids and all kids in between.

And what I saw in one of the reports that I got for students in my class was the fact that my high achieving students had very high growth scores and my low achieving students had very low growth scores, and that is obviously a big red flag.

So as a teacher I had to examine what I was teaching, how I was teaching it, how I was assessing it, how I was addressing the needs of those lower achieving students, made some modifications, did some different things with assessment, instruction, brought in some volunteers, did some small group work, did some after school work with those students, and was able to use value-added scores from the following school year to measure whether or not those changes had been effective.

Luckily, they were, and our low achieving students were able to make those gains that we wanted them to make and, in fact, across the board our middle and high achieving students also made positive growth gains based on that.

And then one last thing I would like to show, which I think is important, is the ability that we have to look at students in particular teachers' rooms. These are from last school year. These are sixth grade math reports. There were three different teachers in our district that taught sixth grade math.

And just being able to look at the different strengths that teachers have—this is a report for Teacher A, and we can see that the—these are broken apart into low achieving students, middle achieving students and high achieving students. The green bar there in the middle would represent students at that level making a year's worth of growth, making the—making it where they are predicted to make it.

And we can see that Teacher A is helping her low and high achieving students to make a year's growth, but luckily is taking her middle achieving students and taking them even further. Those children in the middle are scoring higher than they are predicted to score based on their test history and students like them in the past have scored.

Teacher B has a different look. Teacher B is making positive growth with her lowest achieving students. The low achieving stu-

dents in Teacher B's class were making more than a year's growth in a year's time.

Middle achieving students were making it where they were predicted to. And high achieving students were making it just a little bit lower than they were predicted to, and this is an important thing to examine.

We often in schools—when we are measured on whether or not children pass a state test, then that tends to be the focus. And we sometimes forget those students at the high end who we know are very, very—they are gifted. They are very bright. They are going to pass the state test with little to no intervention from the school.

We still need, as a school, to look at how we have grown those children, have we met their needs. And so if we look at Teacher A and Teacher B, they obviously have very different strengths.

And this is a very important piece of information that then needs to be shared between these two teachers and the principal—you know, how is Teacher A working with students that is helping those middle achieving students make the gains that they are making, and how is Teacher B doing things that is helping those low achieving students make the gains that they are making.

In other words, not all teachers have the same strengths, and if we can leverage the differences and the strengths that teachers have and use that in a forum together to discuss how we are teaching, that is the real power of using value-added data.

Thank you.

[The statement of Ms. Hartley follows:]

Prepared Statement of Katie Hartley, Teacher, Value Added Data Specialist, Miami East Local Schools, Miami County, OH

Hello Chairman Miller, Ranking member Kline and Members of the Committee: Good morning, my name is Katie Hartley and I am a teacher and value added data specialist for Miami East Local Schools in Miami County, Ohio. I'm here today to talk to you about how I have used value added and achievement data in my classroom and with other groups of teachers to make decisions about curriculum and instruction.

Battelle for Kids, a nonprofit organization, brought value added data analysis to schools in Ohio in 2002, and Miami East was one of the first school districts in the state to begin to use this kind of information. Value added data models use a student's individual test history, along with historical data of other students to predict each student's performance. Each student's actual performance is then compared to their predicted performance to find a value added score. The difference between a student's predicted performance and actual performance (positive or negative) is attributed to the school and/or teacher. This value added measurement allows schools and teachers to evaluate the effectiveness of current enacted curriculum and instructional practices.

Over the past eight years I have used these value added scores from students in my classes to evaluate the strengths and weaknesses of my teaching, made changes accordingly, and made judgments about these changes with value added scores from subsequent tests. For example, when low achieving students in my fifth grade math class received lower value added scores than high achieving students in the same class, I had to examine what skills I was teaching in that class, how I was teaching those skills, and how I was measuring students' understanding and mastery of the skills. I had to decide what I was doing in my classroom that was allowing high achieving students to score even higher than predicted, but was keeping my low achieving students from scoring where they were predicted. I decided to keep the curriculum the same since I was teaching all the skills and knowledge that the Ohio Department of Education put forth for fifth graders in math, but decided to change some of my instructional and evaluation techniques. I incorporated more cooperative learning opportunities for students to work together, more hands on activities for students, more games that practiced essential skills, and also arranged for many low achieving students to have additional help with their math work either from

a volunteer or myself. When the value added scores came out the following year, students at all achievement levels (high, middle and low-achieving students) had much higher value added scores than the year before. Without the value added scores for students in my classes, I would not have known I needed to make these changes, nor would I have had a means to measure the effectiveness of the changes I made in my teaching. Without a longitudinal data system with the ability to link student scores over time, this information would not have been available. In other words, I would not be as effective a teacher without these data, and without the support of my local and state agencies. Dr. Todd Rappold, my district superintendent, and Dr. Deborah Delisle, state superintendent, both believe strongly in the use of data to inform educational decisions, and in giving educators the tools they need to do this effectively and successfully.

I have also worked with all teachers at Miami East Schools on the use of value added and achievement data to make decisions, and plan for instruction for each school year. Our ability to look at student level data both for achievement and value added scores has allowed us to make many improvements in teaching and learning in our schools. Miami East has received the top rating the state of Ohio gives school districts, 'Excellent with Distinction' two years in a row. This rating is reserved for school districts that not only have high achievement scores, high graduation and attendance rates, but also have at least two consecutive years of positive value added scores. The staff at Miami East has demonstrated a dedication to using data to improve instruction, and our students have benefited from this work. The quality of the education students at Miami East receive is directly correlated to their access to longitudinal student level data, professional development time and resources around the use of value added data to inform instruction, and the leadership and support of the state superintendent, the district superintendent, and the district value added specialist. A quality education for Miami East students is made possible by quality student level data.

Chairman MILLER. Mr. Reidenberg? Am I pronouncing your name correctly?

STATEMENT OF JOEL R. REIDENBERG, J.D., PROFESSOR OF LAW AND DIRECTOR OF CENTER ON LAW AND INFORMATION POLICY, FORDHAM UNIVERSITY SCHOOL OF LAW

Mr. REIDENBERG. Reidenberg.

Chairman MILLER. Reidenberg. My apologies.

Mr. REIDENBERG. Good morning, Mr. Chairman. Thank you very much to you and to the distinguished members of the committee for inviting me to testify this morning.

It is really an honor and a privilege to be able to address the important privacy issues associated with databases of children's educational records.

My testimony this morning is going to draw on the Fordham study that the ranking member introduced a few minutes ago that I co-directed along with my colleague Jamela Debelak, who is here with me, from Fordham.

I am testifying today, though, as an academic expert and I am not representing the views of any organization. What I would like to do in this oral part is to summarize the written statement I have provided to the committee for the record.

My research in this area on K through 12 educational record databases began in October of 2006. At the time I was serving as an elected member of the Board of Education in Millburn, New Jersey—Millburn Township in New Jersey. So I was very sensitive to how we measured the performance of our schools, the performance of our teachers.

But as a board member, I heard a speech by the commissioner of education at the time extolling the roll-out of the New Jersey

SMART data warehouse—that is what New Jersey calls it. And this was a database that was to contain very detailed identifiable information on our district's children that we, as a school district, were going to be required to report to the state.

And in listening to the commissioner speak, I was struck that there seemed to be almost no thought given to the privacy considerations. There seemed to be no thought given to whether the data was necessary for an educational evaluation purpose, whether there were access or use restrictions on the data that the state was collecting from us. There were no data retention policies associated with the data that the state was collecting.

As a board member, I felt as though I was in a position of knowing that my district was about to violate FERPA in sending this information to the state.

I was troubled that the data warehouse was established without public transparency. It was a surprise to all of us. And then as an academic, I started to look into the program and saw that it was part of a national trend driven by No Child Left Behind, recently reinforced by the stimulus bill.

And I went back to Fordham and set out with a research team to try to learn what was existing across the country. And let me stress that our study and I do not challenge the importance and the legitimacy of data collection and the use of data to inform the educational decisions that we just heard about, and to make assessments of performance.

But rather, what I seek to do is highlight the critical need for policy makers to address publicly and to incorporate privacy rules in the planning and development of these systems.

I would like to make three points from the Fordham study. The first is that states are warehousing children's sensitive personal information at the state level. Our study found that most states have established state-wide databases of children's information.

Typically, it was in identifiable form at the state level, because very few of the states have firewalls that would effectively separate the children's identity from the state officials who would have access to or be maintaining the databases.

Approximately one-third of the states are using Social Security numbers as the identifier for children at the state-level database. For a disturbing number of states—and I can cite states like Alabama, Arizona, Maryland, Nevada, Oklahoma—key information on the data warehousing programs, such as the types of data being collected, were simply not publicly available.

Our team of researchers—we had eight graduate students looking at this, trying to find it—weren't able to find the information. It means that state governments are conducting major data processing operations essentially in secret from parents and from the public at large.

We found that sensitive data is collected, certainly, for NCLB reporting obligations, things like test scores, race, disability status. But we also found that other data was commonly collected that didn't appear to be for NCLB reporting purposes and didn't appear on its face to be associated with core educational assessment purposes.

So for example, 22 percent of the states were collecting at the state level, in—often in identifiable form, whether particular students were pregnant when they were in school. Forty-six percent of the states were collecting mental health illness information, whether students had been jailed.

Louisiana requires the state—the school districts to report to the state level by Social Security number whether students use foul language in class.

Data seems to be collected for other goals that—like delivery of social services. So for example, there are states that collect the birth weight of a teenage mother's baby. So it is important for social services purposes, but the question that we pose is is it necessary for that to be part of an educational record in identifiable form at the state level.

We found that the United States Department of Education was promoting interoperable standards. Interoperable standards are important and valuable for the efficiency and the efficacy of the data collection, but it also means that creating a national database of schoolchildren becomes a turnkey operation, particularly if little attention is paid to privacy in the construction of the databases.

The second point that I would like to raise is the Fordham study documented that basic privacy protections were lacking, and rules need to be implemented to assure children's data is adequately protected.

The lack of transparency for the data warehouses was deeply troubling, and our research team had significant difficulty and was unable to find publicly available information on what the data being collected by the states was.

That means for parents, there are secret surveillance systems of their children. For the public, it means that state governments aren't accountable because the public doesn't know what they are doing.

We found most states did not have detailed access and use restrictions on the data held by the state. Most states did not require database users to enter into confidentiality agreements. Most states did not have data retention policies.

And it is very significant, because that means when states collect information on discipline, children's interaction with the juvenile justice system in particular, the juvenile justice system seals those records, often expunges those records when the child reaches 18. The state educational databases do not. There is no data retention requirement. There is no expungement. There is no seal. We found this to be both surprising and troubling.

Most states are using identifiable children's information at the state level. Do they really need to know the identity of particular children? Anonymous information proves to be very difficult, to actually make the data anonymous.

We heard the example from Colorado. The data is anonymous, yes, but deleting names, creating new I.D.s, isn't sufficient. Computer science techniques today make it very easy to re-identify data. If you can look at clusters and cross matching and cross referencing clusters, it becomes very simple to re-identify from purportedly anonymous information. That is a very significant finding that we saw in the data.

And lastly, we found that just the sheer scope of data collection reflects that states do not seem to be worrying about the very basic privacy principle of data minimization—in other words, that data collections not just be fishing expeditions because we think the data at a point in the future will be useful.

The third point that I would like to raise from the Fordham study is that strong security is necessary to minimize the risks of data invasions, scandals and meltdowns. We are talking about centralized warehouses of children's personal information. That is a target.

Data security measures won't address some of the essential policy decisions for privacy, like use restrictions, like data minimization or retention periods. But what they do do—they play a critical role in implementing the protection to prevent unauthorized access, to prevent unauthorized use, and to prevent disclosures.

It is inevitable that children's information will be compromised from these central databases. Just look at the financial services sector and how, in the banking industry, we have seen the number of data leaks.

In the education sphere, from state databases we already had the experience of Nashville, Tennessee. About a year ago, all of the educational information on public schoolchildren in the city of Nashville and 6,000 parents were disclosed on the Internet, freely available on the Internet, because it was not properly secured.

Data loss will occur. A hundred thousand students and teachers in Greenville, North Carolina had their information lost when a laptop was stolen. Data spying and voyeurs and predators will go after the information. So we have to be very careful how we secure it.

Importantly, states should avoid storing identifiable information. That is the best—one of the best protections. State-of-the-art encryption is necessary. Access controls, use restrictions, need to be implemented.

And like the Internal Revenue Service, audit logs that indicate when problems are there, misuse is there, intrusions have occurred ought to be kept.

Let me conclude by recommending three steps that Congress can take to protect children. As a condition of continued federal funding of state warehouses of children's information, I think Congress should first require that states articulate through statute or regulation the justification for the collection of each element of identifiable information. This assures that legitimate uses are transparent and sufficiently compelling to warrant the privacy tradeoffs.

Second, require that states define specific data retention periods that are clearly linked to the specific purpose for which the data is originally collected. This minimizes the risk of data spills, protects against mission creep.

And lastly, that states be required to adopt an oversight mechanism for the collection and use of children's educational data. We have seen this in the Department of Homeland Security. Congress required DHS to have a chief privacy officer. Congress has required the Department of Justice to have a chief privacy officer. This model provides for transparency to the public and oversight for compliance with privacy requirements.

Thank you very much.

[The statement of Mr. Reidenberg follows:]

Prepared Statement of Joel R. Reidenberg, Professor of Law and Founding Academic Director, Center on Law and Information Policy, Fordham University School of Law

Good morning Mr. Chairman, Ranking Member, and distinguished members of the Committee. I would like to thank you for the invitation to testify today and to commend you for recognizing the importance of privacy protections in the development of databases of children's educational records.

My name is Joel Reidenberg. I am a Professor of Law and the Academic Director of the Center on Law and Information Policy ("CLIP") at the Fordham University School of Law. As an academic, I have written and lectured extensively on data privacy law and policy. Of relevance to today's hearing, I directed with Jamela Debelak, CLIP's Executive Director, the CLIP report "Children's Educational Records and Privacy: A Study of Elementary and Secondary School State Reporting Systems" (Oct. 28, 2009), *http://law.fordham.edu/childrensprivacy.* I am a former chair of the Association of American Law School's Section on Defamation and Privacy and have served as an expert adviser on data privacy issues for the Federal Trade Commission, the European Commission and during the 103rd and 104th Congresses for the Office of Technology Assessment. I have also served as a Special Assistant Attorney General for the State of Washington in connection with privacy litigation. In appearing today, I am testifying as an academic expert and my views should not be attributed to any organization with which I am affiliated.

My testimony today draws on the Fordham study and I would like to make three points directly from it:

1. States are warehousing sensitive information about identifiable children.
2. The Fordham CLIP study documents that privacy protections are lacking and rules need to be developed and implemented to assure that children's educational records are adequately protected.
3. As part of basic privacy standards, strong data security is necessary to minimize the risks of data invasions, scandals and melt-downs from centralized databases of children's personal information.

My research focus on the treatment of K-12 educational records began in October 2006. As an elected member of the Millburn Township Board of Education in New Jeresey, I heard a speech by the state commissioner of education extolling the rollout of the NJ SMART data warehouse later that fall. The NJ SMART program required our district to provide detailed, sensitive information about our school children on an identifiable basis to the state's central database. None of the commissioner's plans indicated any effort to focus data collection on truly necessary information, nor did they reflect any limitation on the purposes for use of the data once collected, nor did the plans appear to have any means for parents to check the accuracy of state-held information, and nor did the plans have any limitations on the length of storage. The only recognition that privacy might be affected by NJ SMART was an architecture that included data security mechanisms. As a Board member, I was disturbed that the state had given our district a mandate that would invade our children's privacy for ill-defined purposes in a way that appeared to put the district in clear violation of the Family Educational Rights and Privacy Act ("FERPA"). I was equally troubled that this database was established without public transparency and debate on the policy ramifications for children's privacy. Our Board and others we asked had not even heard about the program.

In delving further into the New Jersey program, it became apparent that New Jersey was part of a national trend to create state data warehouses of children's educational records driven by No Child Left Behind and more recently expanded by the American Recovery and Reinvestment Tax Act of 2009. The national trend similarly had emerged without public debate regarding privacy. As a result, we launched the Fordham CLIP study to determine what existed across the country at the state level, to assess whether states were protecting the privacy of the children's information in these databases and to make best practices and legislative reform recommendations as appropriate.

At the outset, I would like to stress that our study and I do not challenge the importance and legitimacy of data collection and use to better inform educational outcomes. Rather, I seek to highlight the critical need for policy makers to incorporate privacy rules in the planning and implementation of these systems so that the important and legitimate goals of educational accountability do not undermine privacy and so that the important and legitimate privacy concerns do not pose unnecessary obstacles to educational accountability.

1. States are warehousing children's sensitive personal information

The Fordham study found that most states have established state-wide databases of children's educational records. The information held at the state level is typically identified or identifiable to individual children because the databases use unique identifiers for each child and very few states use systems that establish a firewall to keep the identity of individual students known only at the local level. One-third of the states track students through their social security numbers. In other words, most states are developing systems that centralize at the state level each individual child's information rather than transferring data aggregated by cohorts to the state level.

For a disturbing number of states such as Alabama, Arizona, Maryland, Nevada and Oklahoma, key information on the data warehouse programs including the types of data that were being collected and used were not publicly available. This means that state governments are conducting major data processing operations involving children's sensitive information essentially in secret from parents.

In states where information was publicly available on the data warehouse programs, the Fordham study found that states were collecting children's personal information to comply with NCLB reporting obligations such as test scores, race, ethnicity, gender, and disability status. However, the states were also collecting sensitive information well beyond NCLB reporting requirements. The following table gives some examples of the sensitive data collected by states.

Longitudinal Databases and Sensitive Data

- ***32% of states collect children's social security numbers***
- ***22% of states record student pregnancies***
- ***46% of states have a mechanism in place to track children's mental health, illness and jail sentences***
- ***72% of states collect children's family wealth indicators***

Source: Fordham CLIP Study, "Children's Educational Records and Privacy: A Study of Elementary and Secondary School State Reporting Systems" (Oct. 28, 2009), p. 27

Many additional data elements included in the state databases do not appear to be collected for NCLB reporting purpose nor for core educational assessment purposes. Louisiana schools, for example, must report to the state the social security number of each child who is disciplined for the use of foul language in school.

Data warehouses appear to gather data for other goals like the delivery of social services. For example, Florida uses social security numbers to collect information about its K-12 children and collects the birth weight of a teenage mother's baby. While the birth weight of a teenage mother's baby can be valuable information to anticipate social service needs, the decision to include this information as part of an educational record at the state level permanently linked to the teenager and the baby raises many privacy risks that need to be justified and balanced against the actual benefits for the mother and child. The following table illustrates some of these types of data found in the state data warehouses.

Examples of Other Sensitive Data
Collected by the States

- ***Birth order***
- ***Birth weight of a student's baby***
- ***Victim of peer violence***
- ***Medical test results***
- ***Parental education level***
- ***Mental health problems***
- ***Criminal history***

Source: Fordham CLIP Study, "Children's Educational Records and Privacy: A Study of Elementary and Secondary School State Reporting Systems" (Oct. 28, 2009), p. 31

In developing data warehouses, the U.S. Department of Education has encouraged the use of interoperable data standards. Organizations, such as the Data Quality Campaign and the Standards Interoperability Framework Association, have significantly advanced the development of common data protocols. These common protocols are valuable to improve the efficiency of data collection and use. But, the use of interoperable data standards across state lines also means that the creation of a national database of children becomes a turn-key operation. Until the recent efforts of the Data Quality Campaign, basic privacy protections were not included as key components of the work on common data standards.

2. The lack of privacy protection

The Fordham study showed that the state data warehouses of children's information typically lacked basic privacy protections and, often, were not in compliance with FERPA.

Existence of Key Privacy Protections

- **Only 18 states have detailed access and use restrictions**
- **Only 18 states require database users to enter into confidentiality agreements**
- **Only 10 states have data retention policies**
- **49 states make FERPA information accessible on the Internet, but for many the information is hard to find, vague or incomprehensible**

Source: Fordham CLIP Study, "Children's Educational Records and Privacy: A Study of Elementary and Secondary School State Reporting Systems" (Oct. 28, 2009), p. 39

As a starting point, the states' lack of transparency for these databases is deeply troubling. Our research team had significant difficulty and was unable to find publicly available information on the data collected by many states. As far as parents are concerned, this means that state governments have created secret surveillance systems for their children. The non-transparent nature of these systems also means that state government can avoid public accountability for its treatment of children's personal information.

The technical architectures generally did not adequately seek to de-identify children's information at the state level. To the extent that outcome assessment can effectively be accomplished by examining cohorts at the state level, rather than individual children, there is no need for the state educational agency to have individual student records. The use of truly anonymous information would avoid privacy issues. However, we did not systematically see careful attention to architectures that established identity firewalls. Professors Krish Muralidhar and Rathindra Sarathy have demonstrated that re-identification of specific children from purport-

edly anonymous student information is already a problem in the context of public reporting on school performance.[1]

Data minimization, a basic privacy principle that collections of personal information should not be conducted as general fishing expeditions, is absent as a guiding policy for the state warehouses. The scope of sensitive children's information that is collected by states appears to be excessive with respect to the context and core educational purposes of the databases.

The state data warehouses generally did not have clear legal limitations on the purpose for which data could be accessed and used. Without purpose limitations, states, such as New Jersey, are in facial violation of FERPA. FERPA only permits local schools to report data to state agencies in identifiable format for "audit and evaluation" purposes. The lack of purpose limitations strongly suggests that states will begin a mission creep and use children's educational data for a multiplicity of purposes unrelated to assuring the educational performance of the state's schools. Most states also did not explicitly require state officials to agree to confidentiality before accessing student information.

The states by and large ignore data retention policies. The lack of storage limits means that a child's third grade peccadillo and youthful indiscretions will indeed become a "permanent record" since states store detailed disciplinary and social information, including in some instances if a child was the victim of bullying. The lack of storage limitations is a facial violation of FERPA as FERPA requires that data transferred to state authorities for audit and evaluation purposes not be retained longer than necessary to accomplish those permissible purposes. The lack of durational limits also undermines other important public policies. For example, the detailed disciplinary information collected on identified students, including involvement and convictions under the juvenile justice system will be held indefinitely as part of the "educational records" database. While the juvenile records are typically sealed and may be expunged when a minor reaches adulthood, the state's educational database without a data retention policy does not provide any such protection.

Many states outsource the data processing services for their data warehouses. While security and confidentiality provisions can be found in some of these contracts, the clauses are typically very circumspect with respect to the vendor's obligations. Vendor contracts are generally silent with respect to uses and retention of data by the vendor.

The Fordham CLIP study identified key privacy protections that need to be implemented for children's educational record databases:

- States should implement a technical architecture to prevent access to identifiable information beyond the school officials who need to know
- States that outsource data processing should have comprehensive agreements that explicitly address privacy
- States should limit data collection to necessary information for articulated, defined purposes
- States should have specific data retention policies and procedures
- States should explicitly provide for limited access and use of the children's data
- States should provide public notice of state data processing of children's information

3. Strong data security is necessary to minimize the risks of data invasions, scandals and melt-downs from centralized databases of children's personal information

In addition to basic privacy protections, data security is critical when information relating to identifiable children is centralized at the state level. Data security measures do not address the essential policy decisions for privacy protections like data minimization, purpose limitations, and defined storage periods. But, data security measures play a critical role in the implementation of privacy protections specifically with respect to the prevention of unauthorized access, use and disclosure of personal information.

The centralization of children's information at the state level increases the risks and scope of loss from security incidents. The centralization means that data security breaches will be on a larger scale than if data were held solely at the local level. For example, according to the Congressional Research Service up to 1.4 million residents of Colorado had their names, social security numbers and birth dates com-

[1] Krish Muralidhar & Rathindra Sarathy, "Privacy Violations in Accountability Data Released to the Public by State Educational Agencies," paper presented to the Federal Committee on Statistical Methodology Research Conference, Washington DC, November 2-4, 2009 available at: *http://gatton.uky.edu/faculty/muralidhar/EdPrivacyViolation.pdf* (last visited Apr. 9, 2010).

promised when a database from the state department of human services was stolen from a private contractor in Texas.[2]

It is inevitable that security of the children's information will be compromised. The experiences in the financial services sector that have been revealed by data security breach notification laws reflect the magnitude of this risk. Despite the deployment of significant resources and the economic incentive for banks to avoid liability, the number of compromised credit cards in the United States is staggering. The Heartland Payment Systems breach alone in 2009 involved more than 100 million credit and debit card transactions. State departments of education have neither the resources nor the same high level of incentive to protect children's information to the degree that the financial services sector does.

The substantial security risks to children's educational records in data warehouses can be illustrated by a few examples:

- Data spills occur when school or state officials fail to assure adequate access controls and encryption for student records

Recent Data Spills

Catawba County, NC: names, test scores and SSNs of school children exposed on the web (2006)
Nashville, TN: personal information of 18,000 students and 6,000 parents released on the internet from state data warehouse program (2009)
100 Public Schools and Local Government Entities: FTC warns that their files of personal information can be found freely on the web with P2P technology (2010)

- Hackers gain access to data when it is insufficiently protected

Hacking Cases

Churchill High School, Potomac, MD: students hacked school records system to alter data
Haddonfield High School, Haddonfield, NJ: students hacked into school records database

- Data loss and theft compromise educational records when they are insufficiently protected

Loss and Theft Cases

Broward County, FL: ChildNet lost personal information on adoptive and foster families including SSNs, passport numbers, credit data, drivers' license information
Chicago Public Schools, IL: lost personal information on 40,000 teachers and employees when 2 laptops stolen
Colorado: lost health records on 1,600 named, autistic children when laptop stolen from state employee's home (2005)
Greenville County School District, NC: lost personal information on 100,000 students and staff when district laptops auctioned off

- Data spys and voyeurs who are internal employees with access privileges abuse their access to personal information for personal gain

Spying and Voyeur Cases

UCLA Medical Center: hospital worker sells celebrity patient information to media
IRS: tax agent in Kentucky convicted for spying on 200 actors and sports figures

[2] CRS Report for Congress, Data Security Breaches: Context and Incident Summary, p. 62 (May 7, 2007) available at: *http://www.fas.org/sgp/crs/misc/RL33199.pdf*

Strong data security for children's educational records is, thus, essential. Four critical features for a strong security system are:

- States should avoid the storage of identifiable information whenever possible.
- States should use state-of-the art encryption to protect children's data
- States should have robust access control and use authorization policies in place
- States should, like the IRS, maintain audit logs that track system use to detect intrusions and police internal misuse

Conclusion

The Fordham CLIP Study recommends several measures that I believe Congress should consider as a condition of continued federal funding of state data warehouses of children's information:

1. Require that states articulate through statute or regulation the justification for the collection of each element of identifiable information. This assures that the legitimate uses are transparent and sufficiently compelling to warrant the privacy trade-offs.
2. Require that states define specific data retention limitations that are clearly linked to the specific purposes for which the data is originally collected. This reduces the risks of data spills, protects against mission creep, and
3. Require that states adopt an oversight mechanism for the collection and use of children's educational data. A Chief Privacy Officer in the state departments of education would, like the CPOs in the federal Department of Homeland Security and Department of Justice, provide transparency to the public and oversight for compliance with privacy requirements.

Chairman MILLER. Thank you.

And thank you to all of you for your testimonies.

Ms. Hartley, I am going to start with you, and then if maybe Mr. Kitchens and Mr. Wenning can respond to the question, but I think it—you showed us Teacher A and B, and the—as we look forward to a more collaborative workplace and school site, and hopefully between best practices between schools and what a district's goals are, when we look at that information on how a particular teacher was doing in math or reading with low achieving, high achieving, incomes, students—however you mix them—the next logical step, it would seem to me, is not only to be sharing that information and the ability of teachers to assess how they are doing, but also what other teachers are doing, and then hopefully having a principal, an academic principal, that is prepared to see how he—how you can then share that information.

Is that, in fact, being done? Because again, it is an interesting graph, but if it is then not utilized—and what is the ability and the time constraints of others on utilizing that data to the benefit of the—of those teachers and, clearly, of the students, if you could transfer those talents across the students that they are responsible for?

Ms. HARTLEY. That is a great question. It is being done. It is being done in my school district. Each grade level and department, grades kindergarten through 12, are—meet regularly to write what we call action plans on a yearly basis, and those action plans are based on data.

Action plans, while they are written as a grade level or as a department, are largely based on value-added scores that we have seen.

So those are real graphs that Teacher A and Teacher B really looked at in the fall of this school year and really had some conversations about their instructional practices, their assessment techniques, and in some ways the grouping of students, how we

place students in specific classes, how we—you know, how do we group students.

And some decisions were made based on those graphs, and we are hoping that the result of that, then, will be that the strengths that Teacher A brought to the table and the strengths that Teacher B brought to the table will become both of their strengths.

Chairman MILLER. If I can just add to that, and then I am going to—I am going to go to Mr. Kitchens and Mr. Wenning, the question also, then—how is that tool not just the collaboration between those teachers but in terms of further professional development—how is that information used?

Yes.

Ms. HARTLEY. Okay.

Chairman MILLER. Just quickly you, and then——

Ms. HARTLEY. Okay. As a building or a district leader, you would definitely want to know that information. And as the instructional leader of a building, the principal's responsibility is to ensure the best education possible for every child in that building.

While it is not necessarily being done, I would like to see individual professional development efforts be made to teachers based on some of the information that we have had there.

For example, if, you know, Teacher A was not necessarily making the growth—their low and high achieving students were making an average year's worth of growth, which is great, so Teacher A should really be focusing on professional development that will target some of their higher achieving students.

And I know for a fact that Teacher A is actually working with a gifted specialist this year on what she can do in her classroom to engage those students and bring out the growth measures that they would like to see from those students.

Chairman MILLER. Thank you.

Mr. Kitchens?

Mr. KITCHENS. Sure. One of the things that we like to do with our network is create professional learning communities in our district. And that is to say how would we unite all of the fifth grade teachers of the district so that they could share knowledge of how well their children were performing as a group district-wide, or how well they were performing in a site.

So in every school site of our district, we have organized our teachers into professional learning communities. And we have instructional leaders in the schools.

And I am very proud to tell you, you know, we pay our teachers extra duty to observe as leaders in the professional learning community, and—much like we pay our coaches for athletic extra duties, and it is very important to us to establish dialogue, because collaboration is the key.

And using the data and knowing and understanding where our students need assistance is our number one priority in establishing that professional learning community within the school district and within the school sites to focus on the areas that we——

Chairman MILLER. But does the data allow you to segment those learning communities so, again——

Mr. KITCHENS. Yes.

Chairman MILLER [continuing]. If the teacher is doing well in reading—assuming they have multiple responsibilities——

Mr. KITCHENS. That is right.

Chairman MILLER [continuing]. If they are doing well in reading, you can segment them because of the data to work with a group of math——

Mr. KITCHENS. Yes.

Chairman MILLER [continuing]. Instructors.

Mr. KITCHENS. Yes, absolutely, and we see that as a key and—to foster that communication and action plan. We ask each school and site to foster or develop an action plan related to the data, and that action plan is the business of the PLC.

Chairman MILLER. Thank you.

Mr. Wenning?

Mr. WENNING. Thank you, Mr. Chairman. And the question cuts to the heart of the purpose of this data, and that is to connect student results to specific instructional resources for that student, for those educators, and professional development for them.

In Colorado we have a very large state, very expansive with a lot of rural districts, and one of the keys is allowing that kind of collaboration among educators about results and instructional resources to happen state-wide so that our educators connected—that are in our rural areas have access to our educators that are in our urban areas, and that the instructional resources are actually shared across the state because of this information we have at the student level that is available only to educators with a right to it.

But then at a broader level, just connecting strengths or weaknesses in students more broadly to specific strategies, to professional development paths, and allowing collaboration through our new tools across the state is a real key attribute of this longitudinal data.

Chairman MILLER. Thank you.

Mr. Kline?

Mr. KLINE. Thank you, Mr. Chairman.

And again, thanks to the witnesses. I apologize for being absent for a bit. It is the crazy way we do business here, where we scoot back and forth between different committee hearings.

I will confess that I captured some of the testimony via screen. It is another magical piece of technology and very useful.

I had a meeting with about 20 school superintendents in my district just during the Easter break, talking about No Child Left Behind, and Elementary and Secondary Act reauthorization, and Race to the Top, and blueprints, and all of those things, a wonderful, wonderful round-table discussion.

And one of the things that the superintendents did express was it would be great if we had data and a common system so that we could share this information, and we could track student progress, teacher performance and all of those things that we have been talking about.

I say that just to emphasize that I am really keenly aware of the value and the importance of this kind of data. But as I said in my opening statement, I am very, very concerned about the potential abuse of this data. So I am going to go to Professor Reidenberg, if I could.

I did listen to your testimony, and you were citing some pretty scary things, frankly, and your example of the justice system seals a minor's record and it becomes invisible to everybody, but potentially in a student education database that misconduct as a student would be available forever—so I am, if anything, even more alarmed after seeing the results of the Fordham study and your testimony.

I was struck by some of the information that seems to be captured in these databases. For example, the birth weight of a student's baby, the student's birth order, information that doesn't seem to have anything to do with a student's progress. Do you have any—did your study reveal or do you have any opinion on why this information is collected and what it could be used for?

Mr. REIDENBERG. We found the information by going through the—what are known as the data dictionaries. These are the coding books that the local schools will use to report data to the states. So we will see different codes for various—describing data elements.

And that is where it comes up. We didn't find any statements explaining why that—those particular data points were collected. I have had some conversations I can answer separate from the study. Birth weight of a teenage mother's baby is important for a variety of social services, health services, for the baby and often the mother that, in some states, they believe that is important to be provided as part of the educational package so that that mother can succeed in school.

I think what that reflects, though, is it is a mission creep. It is using the educational record database for lots of uses beyond the straight educational tracking system that one would usually associate it with. It also tends to be a surprise that they are collecting that.

New Jersey, my state, collects information—asks schools to report who the students' health insurance carrier is. They want to know certain medical test results as part of the state database on an identifiable basis.

Mr. KLINE. Mr. Wenning, is Colorado collecting that sort of information? Is that in the database, the student's child's birth weight, and order of birth, and financial status, income of the parents? Is that in your database?

Mr. WENNING. Thank you, Mr. Chairman. No, that is not in our educational data warehouse.

Mr. KLINE. Anywhere.

Mr. WENNING. Not in education. I don't know——

Mr. KLINE. No, no, I am talking about in——

Mr. WENNING. But in our educational data warehouse, no, we don't have information on birth weight and, really, everything we collect has been specified in statute or rule, and it is—the concerns raised are important.

But no, the most important thing is we know what the data is going to be used for, and there is actually a use case for it. There is a major shift going on between state agencies moving towards compliance entities to entities that are trying to provide service and support to the field. And I think we are catching up with that at this point.

Some of this data may very well have been collected for old purposes that are no longer relevant. But no, not in Colorado. We don't collect information on birth weight and put that in our state education data warehouse.

Mr. KLINE. I am heartened. That is good. Thank you.

Again, Professor Reidenberg, it looks like the way some of this data is collected and used—and clearly, it does seem to me that there is an intent here to share student data with post-secondary education, and it seems that that might have some value.

But it also looks like some of this may be just flatly in violation of the law, the—of FERPA. Did you address that at all? I missed that in your testimony. Are there instances here where some states are just clearly violating the law?

Mr. REIDENBERG. I addressed it more in my written statement, but the answer to that is yes. We found in our reviews of the state programs that in instances where states, for example, did not have purpose limitations on the data, in my judgment it is a violation of FERPA for the local school district to give the state identifiable data.

The school district is permitted to give the state educational authorities identifiable data for audit and evaluation purposes. Unless there is some restriction, the state can use that data for other reasons. The local school district isn't permitted to give it to the state.

We found cases we obtained through Freedom of Information Act requests—copies of vendor agreements between state departments of education and their third-party vendors doing the data processing, and we found agreements such as the one in New Jersey that is not under the control of the department of education. That is a violation of FERPA.

We found in most instances, the vendor agreements were silent or said very little about privacy and how they were going to be treating the data. I think there are—was evidence that some of those agreements were not in compliance with FERPA.

Mr. KLINE. Okay.

Thank you, Mr. Chairman. It seems to me as we go forward with this, we really are going to have to pay attention to how the statute comes out and be mindful. It is, frankly, alarming to me that some of that information is out there and too easily accessible.

And I yield back.

Chairman MILLER. Thank you.

Mr. Scott?

Mr. SCOTT. Thank you. Excuse me. Thank you, Mr. Chairman.

Mr. Reidenberg, the information that is gathered on students—is the information gathered in such a way that the data conforms across state and—across the state and across the nation so that you can compare what is going on with one data set in Virginia and one in California?

Mr. REIDENBERG. What we focused on were the particular data elements that were being collected, as opposed to, for example, looking at is this type of school across state lines matching. So I won't speak to that.

What I will speak——

Mr. SCOTT. I mean, is the data in conformity so that the data in Virginia is the same data that is collected in California?

Mr. REIDENBERG. It depends. Some of the states—there are groups of states that are using the same data protocols, so the—the SIF organization has one common data dictionary. So if the state is using the same data dictionary, the answer to that is yes, they are using the same codes to report the same kinds of information.

Mr. SCOTT. Now, one of the data points involves students who do not take the test. It includes dropouts. This is student-specific. One of the problems we have had with counting dropouts is actually counting them, and there are different mathematical formulas.

If you have student-specific data, will the dropout calculation be easy to ascertain?

Mr. REIDENBERG. Probably much easier than today, but what we looked at was not just the state reporting—the local district reporting that a student has dropped out, but their reporting the particular reason that a student has dropped out.

So some of the reasons may be—and I am looking—these are the disciplinary codes. The actual specific disciplinary codes will report criminal damage to property, misappropriation with violence to the person, possessed a pocket knife with a blade of less than two-and-a-half inches. I mean, that is the kind of detail that is being reported to the——

Mr. SCOTT. And so you could actually show that somebody subjected to a simple-minded zero tolerance ended up dropping out and on an aggregate basis some of these policies can become counterproductive, so the reason can be extremely helpful.

Will there be information like an uptick in absences or drop in grade where you can show a student all of a sudden got into some trouble and might need intervention? Will that information be available?

Mr. REIDENBERG. It could be. It would depend on the nature of the trouble the student got into and whether it triggers one of the reporting requirements. We were not——

Mr. SCOTT. Would the school have that information?

Mr. REIDENBERG. I am sorry?

Mr. SCOTT. Would the school have that information?

Ms. Hartley, if a school had information that a student—student's grades dropped or has significant increase in absences, is that information that would be useful to the teacher?

Ms. HARTLEY. Oh, absolutely. You know, as a classroom teacher, I can tell you there is a direct correlation between student attendance and student achievement.

Mr. SCOTT. Okay.

Ms. HARTLEY. Students that are there on a consistent basis do better. When they are not there, it is a very difficult process to catch them up on instruction they have missed, fill in assessment pieces and——

Mr. SCOTT. Now, you showed that the data can be aimed at—per teacher and the different assessments for the teacher. One of the problems—and I know in tennis, half your skill in doubles is picking your partner.

You want to avoid a situation where the teacher starts picking students and a teacher may be unwilling to take on a slower student because it is going to mess up the average.

Can this be done in such a way that you can not discourage the—a teacher from going across the hall and saying, "Well, let me try young Johnny, you are not having much success with him?"

Ms. HARTLEY. Gosh, I don't work in a district where teachers are allowed to choose students. I mean, that is something that is done at the administrative level. I can't speak to how it is done in other districts.

What I can say is that the exciting thing about value-added data and actually measuring a student's growth is that you—teachers no longer necessarily want to avoid those lower achieving students. If we are going to be looking at how we have grown students, as opposed to whether or not they pass or test—pass or fail a state test—those low achieving students have a much lower likelihood of passing the test.

If we can show growth with those students and, you know, feel good about that and be recognized for that growth, as opposed to whether or not they passed the state test, I think as a teacher you are more motivated to take on the task of working with those students.

Mr. SCOTT. Now, Mr. Reidenberg, is the data on the state level—a lot of it can be valuable on an aggregate basis without personalization.

For example, if pregnant teens are dropping out, nothing is being done, or if a lot of low-weight babies are not doing well because you missed an opportunity for early intervention because you didn't take advantage of that, can—how can we make sure that we make best use on an aggregate state-wide basis of the information without violating individual privacy?

Mr. REIDENBERG. That is a great question. That is exactly what I was referring to when I said that we aren't challenging that this information can be very important and used for very legitimate reasons.

The issue is really who needs to know the identity of the student and, you know, why does the state need to know, for example, that Johnny or Sally dropped out of school for religious reasons. That is one of the codings that states report on.

The issue there is how do you structure the technical architecture so that the——

Mr. SCOTT. You mean you might——

Mr. REIDENBERG [continuing]. States get cohorts——

Mr. SCOTT. Wait a minute. You might not need that particular student, but you might be interested in a lot of——

Mr. REIDENBERG. In the cohort. You want to know what is happening with the cohort. So it is certainly—I can easily see—and the commissioner, I am sure, can speak to this, but the cohort information the state needs to know, but does the state need to know that it is Johnny or Sally in this particular district who had this particular problem?

I think if the state needs to know it, then the state needs to be able to publicly justify it through a rule-making proceeding or some kind of enabling statute so that the public can decide if that is real-

ly—or the public can make an assessment if the government is accountable.

Mr. SCOTT. You look to me like you——

Mr. WENNING. Thank you, Mr. Chairman. Appreciate that.

Chairman MILLER. And then we will go to Mr. Roe, so just quickly.

Mr. WENNING. This issue of should the state have it, should the state know it, gets down to an issue, again, of what service do we need to provide to our schools and districts as a state.

And we are all familiar with our federal system. We have got a complex one. I have 180 school districts, ranging from 75,000 students to 25 students. All of them have the same legal expectations from all of you here.

If every district were to keep its own data warehouse, we would have many without them at all. There are basic efficiencies for the state to manage a state-wide data warehouse. Role-based access is essential. FERPA is clear. Those that have a right to the information should have the data.

But it is much more effective and, in fact, much more secure for the state to do this effectively at the state level and then provide access to our districts and schools, rather than having, in our state, 180 data warehouses with 180 privacy processes.

And this is simply a matter of effectiveness and efficiency in the state doing this work. At the same time, states need major investments to manage this data more responsibly. And I think that has been pointed out very clearly. And it is a very important issue.

There ought to be government—we have a government data advisory board that manages how we govern this and provide access to information. We have an education data advisory board that reviews every data collection and makes recommendations to the legislature or the state board to eliminate them. Those are critical safeguards.

But state management of this information is essential if we want to have the effectiveness that we are looking for in education, and we have that tension, basically, to grapple with.

Chairman MILLER. Thank you.

Mr. Roe?

Mr. ROE. Thank you, Mr. Chairman.

And first, just a question toward the chair for information. With 41 states having this data collection—we ran across it in electronic medical records. You have one type of system here, one type of system here. None of the systems talk to each other. It is terribly expensive to do that.

Do we have in our bill, the stimulus package—have we dedicated money so that a state can go in at a very low cost and get a generic system to get the data we think they need? Is that available?

Chairman MILLER. I think Mr. Wenning can answer that as an example, and then perhaps I can elaborate.

Mr. WENNING. Thank you, Mr. Chairman. Not yet. Most of our collections are required by the federal government, and there is a data dictionary and entities like the Data Quality Campaign have been incredibly helpful in helping us get to exactly that vision. But right now, we have multiple disparate systems in our state——

Mr. ROE. But you have had to go—or you have had to—right, and that is incredibly inefficient. And we have seen it with DOD and V.A. where they spent $10 billion and can't talk to each other.

Mr. WENNING. Right.

Mr. ROE. And——

Chairman MILLER. Well, but, you know, I think, obviously, we are—you know, we come along and—Mr. Kitchens, go ahead. Let's have people with experience speak before those of us with an opinion speak.

Mr. KITCHENS. In our district, we use 12 disparate data software programs built by different vendors, and it is a hugely expensive issue. But there is a group called the School of Interoperability Framework Association that has set a lot of standards—not all of them—for data translation between disparate systems.

And one of the things that I will tell you that we—3 years I thought I am ready to distribute data to parents. For 3 years, ladies and gentlemen of the committee, we felt we were ready. And then there would be another thing come up and, "Oh, my gosh, I can't distribute this data because I have got a privacy issue with this because I don't know how many families live in one residence."

And there is an economic unit—there are four economic units over here in this one address, and I didn't take that into account. And my goodness, I cannot distribute this data based on address. I can't distribute this data based on something else.

There has to be business rules in place, and there have to be very serious business rules. It took us 3 years before we finally said we have family information management business processes in place that we know that we can allow our parents access, and they will see their data on their children, and that data only.

And we even have a failsafe in the system that if the status of a family changes—address, let's say one student leaves out of three in a family, there is a divorce, there is something else happening—then access to records is immediately suspended. That is a business rule. Don't let it go on. Stop and resolve it.

Those kind of business rules have to be in place at the district level, site level, to protect the privacy——

Mr. ROE. I guess what I—and not to interrupt, but my time is limited, but wouldn't it be simpler if we created—and much less expensive—you have obviously gone to tremendous—at your own expense, Mr. Kitchens, in Oklahoma to do that.

Just to make a point, I think we need——

Chairman MILLER. That is a very important point. I think the purpose of the grants to the states is that the states will look across the state of California or Colorado and decide that with the mobility of this population now that you can't have systems that don't talk to one another, can't——

Mr. ROE. Exactly. And what we do, Mr. Chairman, is we create systems that don't talk, and then we create another whole business in between to make them talk to each other. I mean, that is—I have seen that in an electronic medical record it happens all the time. One system—anyway. Move on.

Ms. Hartley, thank you for your comments. I think, obviously, data is important. I have used data my entire life to treat patients.

You obviously use data to evaluate students and performance of your teachers.

And I think I could not agree more—without information you can't make any meaningful change. I think the problem that I have is certainly how this data is managed. Is there bias involved in the data?

I will give you an example. Think about the—in "The Blind Side," this young fellow who is picked up off the street with a supposedly 60 I.Q., and if look—if someone had looked at that data and said, "Well, he can't be taught." Well, it turns out he is a college graduate and did very well.

And so I worry about data creating bias, too. And math is a little different. Math is an absolute, but not necessarily so with other things.

And just a comment from you all—I would like to know a couple things. One, a comment was made—is how do you determine the same starting date for the child. How do you know that a child is on the same level when you made that? Because one kid may be here and one here. How do you know that? How do you know they are at the same level of learning, through testing, or——

Ms. HARTLEY. Are you talking about——

Mr. ROE. When you measured performance.

Ms. HARTLEY. Okay.

Mr. ROE. You said we started at the same level. How do you know that?

Ms. HARTLEY. Well, not all students start at the same level, and that is what——

Mr. ROE. Right.

Ms. HARTLEY [continuing]. Value-added does. It allows us to say, "Okay, you know, Johnny has"—in Ohio, 400 is passing on the state test. So let's say that Johnny has a predicted score of a 452. Johnny is a very bright student. He is predicted to not only pass but do very well on the test.

Sally has a predicted score of a 385. Sally has not performed well on tests in the past. Students like Sally have not performed on the subsequent tests. Therefore, Sally is not predicted to pass the state test.

What value-added does, then, is says okay, after Sally and Johnny have taken the test in that grade level, you know, Sally's predicted score was a 385, and Sally's score is a 395, which is still not passing, it is still not at that 400 mark, but Sally has made growth. And that is what——

Mr. ROE. I agree.

Ms. HARTLEY [continuing]. We need to look at. And your reference to the movie "The Blind Side"—you know, we have students like that. I have students like that in my classroom right now who are, you know, traditionally low-achieving students.

And it is not necessarily my goal that they pass the state test that year, but it is certainly my goal to do everything in my power to, in the year that I have them, raise their level of achievement so that maybe after two or 3 or 4 years of that level of growth they are able to achieve that.

Mr. ROE. I believe you would achieve that.

I want to ask one question and then yield back my time, and they can—if they have time later. With all the data we have now, why do you think the U.S. system is failing?

We have got all this information. Why are we failing?

Chairman MILLER. Mr. Wenning?

Mr. WENNING. Thank you, Mr. Chairman. Very quickly. You know, data, data, everywhere, right? Data rich, information poor. The key is we have not put this into a useful format for educators so that it is information, and so that we can build knowledge.

So this issue of data to information to knowledge is the key sequence. We collect tons of data. It is useless because we think that crunching it is useful. Well, no. Educators need information in context so they can act on it.

And that is why we are not getting any breakthrough results with the data we have currently.

Mr. ROE. Thank you, Mr. Chairman.

Chairman MILLER. Mr. Polis?

Mr. POLIS. Thank you, Mr. Chairman.

I thank the panel for their really important testimonie on this topic as we go into the ESEA reauthorization process. The data and the data systems are one of the most important benefits, I think, that can come out of our federal education reform.

Mr. Wenning, I want to congratulate you and Commissioner Jones in Colorado and the rest of your colleagues for your innovative efforts to create a accountability system that focuses on all students reaching college and career readiness by high school graduation.

I think the model that Colorado has come up with provides something that we can learn from in this ESEA process, and I applaud your hard work on developing the Colorado Growth Model.

My first question is regarding the potential of new technology to foster the widespread understanding of performance. And of course, the more people can understand performance—families, parents, academics—it can promote new and broad public conversation and motivate public pressure for sustained reform.

Specifically, the new Web-based tools can provide a critical way to empower parents through giving them information about school choice. However, the digital divide is a major obstacle, especially in low-income communities and some of the communities most in need of the very empowerment that these tools are attempting to provide.

Frequently, parents have limited or no Internet access or aren't aware of where or how to find that useful information, or have a language barrier or a literacy barrier to acquiring that information.

Can you discuss what additional policies and strategies are necessary to ensure that the information actually reaches and empowers parents, particularly parents from an at-risk background?

Mr. WENNING. Thank you. Thank you, Mr. Polis. Incredibly important question. And I would say there are really two issues. One—and this is where the federal government comes in—we have got to close the digital divide and make sure that we have broadband throughout the entire nation.

And as you know, we still have parts of our state that don't have access to high-speed Internet. And that inability is a major chal-

lenge. And of course, we have the technology to overcome that if we have the right investment into that. That is one step. That opens up the pipe, but it doesn't bring about the understanding.

One of the things that we are doing is that anything we provide on the Web has got to be available in a print format. We have got to organize it in brochures. We have got to do cable TV. We have got to make sure it is in multiple languages.

And basically, the role—and this is an incredibly important role for the state, because we have the capacity to reach an entire state, and we have to basically be very deliberate in working with our parent groups, our educators and making sure that we have community forums. And those are all things that require investment and time.

States need to get into that role and recognize their most important function is really to build the understanding of a child's performance to their parents so they can engage constructively in schools, and that is going to take a—really, a multilayered approach.

But of course, the federal government can really be helpful on the broadband issue, so that we do close that digital divide.

Mr. POLIS. I applaud the emphasis on reaching families. Ironically, the powerful and compelling information that you could provide if it was provided only to the information elite and parents who already have a lot of advantages could actually be used to perpetuate some of the learning gaps that have—that exist by empowering parents on the positive side of that divide to go to the schools or attend schools that are better.

I understand that Colorado is taking an open source approach to SchoolView and the Colorado Growth Model. Can you briefly just describe why that is important?

Mr. WENNING. Sure. Thank you. One, you know, think about the iPhone and the apps that are emerging. We found that by creating an open source data visualization platform it has created a lot of room for for-profit and non-profit vendors to work with us.

But what we are trying to do is build collaboration among states to get to a common understanding of performance. You know, for those of you that are in the private sector, we can interpret a balance sheet in the same way from company to company. In education, we have no ability to do that.

In fact, we constantly have debates about evidence rather than how we are actually going to do better. And so what we are trying to do is measure student progress in a common way to understand the productivity of our education system, be able to do return-on-investment analysis, do that with other states like Massachusetts, and begin understanding really what works, rather than just having debates about it.

And by having an open source approach, we found multiple states now that are joining our effort to understand student progress in the same way, how much growth a child is making, and whether it is good enough for them to catch up, to keep up, or to move up to higher levels of performance.

And the open source aspect of this is—means that we are really leveraging public and private investment and makes it—makes the barriers to entry really low for other states——

Mr. POLIS. Briefly, by open source, you mean that academics, amateur psychometricians and hackers can play around with this information and create new ways of looking at it on their own, and if they catch on, they catch on, and if they don't, they don't?

Mr. WENNING. Yes. Now, that doesn't mean they can play around with confidential student information.

But the visual tools that we are creating are essentially trying to create an open market for application development that is useful for teachers and parents and students. And that is really what we are trying to motivate nationally through our work.

Mr. POLIS. Yes. Let me clarify that the word hackers has several definitions, so the one I was alluding to is people who like to code, not people who like to crack privacy firewalls.

I yield back.

Chairman MILLER. Mr. Cassidy?

Mr. CASSIDY. Mr. Reidenberg, Mr. Wenning, it seems metaphorical that you are on either end of the spectrum, because I really get different messages from the two of you.

I have a sense that although everybody is concerned about privacy, Mr. Wenning, you see the potential in regression analysis, put in a bunch of variables, some of which may seen unrelated, do your regression analysis and come out with an R squared which indicates that, "Wow, this is significant. We never thought it would be."

Mr. Reidenberg, I have the sense that you are a little bit more kind of, "Wow, this is what we need, and this is why we need it," and less exploring the possibilities in fear of sacrificing privacy.

That said, let me ask specific questions of you both, and then I will ask you to comment upon my premise there.

Mr. Reidenberg, I am struck that some of the things that you point out as being kind of crazy may actually have a rationale.

So when New Jersey contracts with Montana to take their Medicaid-specific data to an out-of-state database, that may be because the Montana database has experience with HIPAA regulations and they are segregating that data because there is a whole 'nother kind of legal set of rules for that database activity. Is that a fair statement?

Mr. REIDENBERG. No, I mean, New Jersey is contracting with a private vendor to handle all of New Jersey's database. It is not——

Mr. CASSIDY. Well, that is what I saw in your testimony, that it was specific for Medicaid information.

Mr. REIDENBERG. I am sorry?

Mr. CASSIDY. I thought I saw in your testimony that it was——

Mr. REIDENBERG. No, what——

Mr. CASSIDY [continuing]. Specific for Medicaid information.

Mr. REIDENBERG. What you saw was the way New Jersey has structured its system, it is using—it is paying for the database on the general education student population using money coming from the SEMI and MAC programs for Medicaid, which are funds designed to reimburse states for health costs associated with special education children in their classroom.

Mr. CASSIDY. I see, so they are broadening that application to include other educational data even though in the spirit of the law it would be for medical aspects.

Mr. REIDENBERG. In that case, New Jersey is diverting Medicaid money.

Mr. CASSIDY. Got you.

Mr. REIDENBERG. I personally think it is Medicaid fraud.

Mr. CASSIDY. Wait till the new health care bill hits. But that is another story.

That said, some of this seems like it could be dealt with—it seems like you have a specific issue with patients—excuse me, student-specific indicators, so if you are using Social Security, clearly you just want a unique identifier.

And you mentioned a dual architecture. I assume that you want one database for research purposes and another database for the most appropriate person to be able to see student-specific data, your dual architecture. Can you——

Mr. REIDENBERG. Look, it is not—no, the dual architecture structure is one in which the state officials are being structurally separated from the identity of individual students—from identifying information for individual students.

Mr. CASSIDY. Now, let me ask you—Mr. Wenning's comment, how you have 180 school districts—if a kid commits a felony and is expelled and goes from one end of the state to the other, how is that data transferred? How would you see ideally that data transferred?

Because under Mr. Wenning's—I could see that the data will be transferred because you have a state-wide database in which, "Wow, the kid is expelled. Why is the child expelled? He pulled a gun on a teacher."

Mr. REIDENBERG. Well, that information has always been transferred. The incoming school will—at least historically, from my experience as a board member, if we were receiving a child from out of district, we have the child's records from the former district transferred to us.

That can be done today by electronic data interchange as opposed to paper files, as it was in the old days. But that information—you would want to get it directly from the school system.

In Colorado's example, the state is centralizing the data warehousing function. It may make sense in Colorado, not necessarily in other states. When you centralize the data, you magnify the risks of——

Mr. CASSIDY. So then your——

Mr. REIDENBERG [continuing]. Privacy——

Mr. CASSIDY. Just because I am limited on time, so your point isn't so much that you are absolutely against centralizing data, it is just that you would want stronger safeguards to avoid the spillage that you spoke of in Nashville, et cetera.

Mr. REIDENBERG. That is correct. It is not the centralization. Again, I am not—this data, as we have heard, is very valuable for determining school performance quality measures.

Mr. CASSIDY. Now, one more thing, and then I will go to you, Mr. Wenning.

When someone decides to leave because of religious reasons, for example, I could imagine that you might want to do a specific initiative to reassure members of that religious community that know the school is a safe place teaching your values.

I guess—more information—not less, because it seems like I am a physician, the more data you have, the more likely you see relationships you never thought could exist. So what are your thoughts on that?

Mr. REIDENBERG. So why should the state have the list of children, specific children, of a particular religion that are leaving school? The fact that——

Mr. CASSIDY. No, no, no——

Mr. REIDENBERG [continuing]. You have a group, yes, but——

Mr. CASSIDY [continuing]. No, no, no, not of the unique identifier, but rather—again, you mentioned a cohort. At some point, a cohort becomes an individual, and so you still want someone to say, "Wow, we have a uptick here on a regression analysis that we have lost a bunch of kids because of X."

Mr. REIDENBERG. Yes, that can be valuable. But again, I think that is a decision that needs to be made at a public public-policy level rather than a technical behind closed doors which, from our study, seemed to be the case.

Mr. CASSIDY. I am just out of time, almost.

Mr. Wenning, your comments on all that?

Mr. WENNING. Thank you. You know, Mr. Reidenberg's observations are extremely well founded. I think what I disagree with, perhaps, are the conclusions.

Strong security safeguards are absolutely essential, and the examples he cited are unfortunate and unconscionable. It is essential that states do a better job with privacy.

My argument, though, would be that the likelihood of building those types of safeguards in are going to be much more likely done at the state level than in our 180 school districts that have very limited capacity to do so. They are still required to capture this information.

The focus on educational accountability and performance is an imperative. We need to do much better for our children. And this information is critical to bringing that about. But I do not want in any way to diminish the concern over student privacy and the need to have very solid safeguards.

And I think his analysis is spot on in terms of the kinds of recommendations that he has got, but I don't want to make—I want to make sure we are not throwing the baby out with the bath water on state data systems. They have to be more secure. They are incredibly useful.

Chairman MILLER. Congresswoman Chu?

Mr. CASSIDY. Thank you.

Ms. CHU. Thank you, Mr. Chair.

This question is for Mr. Wenning and/or Mrs. Hartley, and it—I actually have two questions pertaining to distinguishing between the growth or the value-added assessment models.

And do you distinguish between them? And one might be more appropriate for a particular school district. My concern is that it seems that since the value-added model relies on aggregate data that it might be more appropriate for homogenous student populations.

And I am wondering whether that model is as well suited to school districts with highly diverse populations, say an urban dis-

trict where you have a large number of suburban students and a very, very large number of poor inner-city school students with many ESL students.

Mr. WENNING. Thank you. I will take that. So yes, these terms are batted around a lot, and value-added models and growth models are different things. The choice of them is really a policy issue in terms of what questions we are trying to answer. They are both applicable to any type of school or student population.

And the main distinction is one of attribution and where the attribution should be made. So the value-added model that Ohio uses, that Tennessee uses, is designed specifically to attribute a quantity of student progress to either a school or to a teacher, so there is a calculation of a teacher effect. That is modeled within a statistical model. And so for example, how persistent is a teacher effect over time? There is an assumption that goes in there.

A growth model like the Colorado Growth Model does not make that attribution. Instead, we ask the educator or the user to make the attribution.

And so for example, when we use this to look at educator effectiveness, the question we ask is what are the growth rates of students associated with this teacher, and we like to look at that over three longitudinal cohorts and then, as a principal evaluating that teacher, they would have that information.

A value-added model would provide an effect coefficient for that teacher that would say this much of the students' learning was attributed to this teacher. And essentially, the attribution is made in the statistical model. We choose to have that attribution rest with the user.

And the reason we do that is because we want to make sure that the quantity is useful to a teacher and a parent and a student. And quite frankly, I find it very difficult to explain an effect coefficient to mom and dad.

So there is a level of precision that is lost with a growth model because of where the attribution lies, but we find that the body of evidence, particularly using the data visualizations we showed, we are able to move up and down from a single child to an entire state with ease using the same language throughout, a very straightforward language.

Value-added models are incredibly useful for research and evaluation purposes, and so the choice of them really depends on the questions the school or district or state is interested in answering.

Both have a very important function, but they represent two approaches that are not at all incompatible with one another.

Ms. CHU. Could you use both simultaneously?

Mr. WENNING. Sure, absolutely. And again, depending on—what question you want to answer and what—with what level of precision would dictate the kind of model you would like to use. And both kinds are readily available in the open source community and from specific vendors.

Ms. CHU. And what about my question about which would be more appropriate for a large urban school district with a widely variable population?

Mr. WENNING. Both are equally appropriate. Again, it just depends on what questions one is trying to answer. For example, if

you want to answer with great precision how well a reading program is improving student outcomes, and you want to control for a variety of other variables and answer that with the precision that a researcher would demand, I strongly recommend a value-added model.

If you wanted to disclose this information so parents could make good choices and you want to just sort of democratize all the hypotheses, a growth model pushed out would be a great way for the public to engage immediately without requiring a researcher to answer that question.

So both are appropriate for a large system. And again, whatever questions one wants to answer and with what level of precision really dictates the kind of model you would like to use.

Ms. HARTLEY. I just have one comment to add. As I work with groups of teachers, it is very nice to have a growth model that does factor out specifics like socioeconomic status, race, all of those factors that, unfortunately, in my experience in working with teachers, is one of the first things that teachers like to point to for failures in students' achievement.

When you work with groups of teachers and students who are failing, rarely do you see a teacher that stands up and says, "Wow, that is my fault." So one of the first things that we point to is, you know, home life, all kinds of factors that a growth model completely takes out of the equation.

And from a professional development standpoint, that is extremely important so that teachers are actually looking at and understanding that the growth measurement that you are looking at is actually what you as a teacher have attributed to that child's learning.

Mr. WENNING. If I could just add, because I will share a slightly different perspective, and this is an important one. It is why it is important that states be able to make choices. We actually firmly disagree with controlling for race or socioeconomic status.

Instead, we have created a growth model that is unbiased based on race or socioeconomic status, and we control for one thing that we think is the most important gap, where a child starts, regardless of their race or socioeconomic status.

And then we disaggregate those results by race and socioeconomic status so we have a common growth measure. What we found is that folks can make excuses very quickly about home life or about socioeconomic status, so we don't control for it. We disaggregate by it. But that was a choice our state made.

Chairman MILLER. I am going to use the prerogative of the chair for a second.

Mr. Kitchens, you started out your testimony talking about mobility, what Mr. Wenning just finished saying. I assume the questions of mobility, where that student started when they entered my classroom is a very important factor in terms of how we allocate—how we believe that classroom or that teacher or that school is doing.

If a child came 2 years behind, and I am judged a failure because they didn't make that—they didn't meet proficiency at the fourth grade or the fifth grade, whatever, that can be factored in this data also, as I understand it, and your use of it.

Mr. KITCHENS. That is absolutely true, and I believe that——

Chairman MILLER. Because this is a major complaint among——

Mr. KITCHENS. Yes.

Chairman MILLER [continuing]. You know, highly mobile districts where teachers say, "Wait a minute, you know, the raw material came to me in this form."

Mr. KITCHENS. All of the data that we have—and we hired a—we are not a very big school district, but we hired a Ph.D. research statistician and, you know, he came in, and I asked him to do a study on behalf of the students in the district, and to tell us what the top three issues were in our district that impeded academic success.

And he came back with attendance is the number on issue. If students attend more than 90 percent of the time, they have a much greater chance of being successful academically. And yet I will tell you that it troubles us deeply that we don't see enough activity at our level, at the state level particularly, backing us up to get students in to school, okay?

The next issue that he said that was extremely important was mobility, and the third issue was discipline, and that if these—if a child had attended school 90 percent or more of the time, if a child had been with the school at least a year academically, if the child had no more than three discipline issues in a year, that they were almost universally successful academically in that sort of——

And so you know, we really take those issues very seriously. And this issue of mobility—I tell you, I think that we have to standardize some information, because we have to pass that information to people and to stakeholders and to parents on behalf of their children.

I mean, if you look at the parent, the student and the teacher, you have to be able to pass information between the parent and the student and the teacher. And if you organize your systems to do that—you know, I am not talking about necessarily at a state-wide level, but at the functional level, at the school level—we have to do this.

And we have to be able to inform the next district because in 4 years, sir, 45 percent of my children will be mobile. And they will drop out at twice the rate of all of the non-mobile students.

Chairman MILLER. Thank you.

Mr. KITCHENS. And they will fail at twice the rate.

Chairman MILLER. Thank you.

Mrs. McCarthy?

Mrs. MCCARTHY. Thank you, Mr. Chairman.

I thank the panel. It has been really fascinating to look at the data. And this is something that a number of us on the committee have been thinking about for quite a long time, and I thank you for the hearing.

My colleague Rush Holt has been working on data collection and matrix access. He is actually going to be introducing today—that I have been working with him on.

With a lot of the questions that, you know, have been coming up—the privacy issue, which I think everybody certainly is concerned about—I mean, that is one of the things that we are looking at even in the health care debate, is the privacy issue.

But we also know that that information, that data, has to get out there. But one of the things that I have been thinking about as you have all been talking—when you get the data, and you see on one of the graphs that you showed on the screens that, all right, here is your—you saw a teacher doing very, very well with a certain population, and you saw a teacher that was just doing okay, and then looking at the growth of the child, student, what—is that over a year's time?

I mean, when do you start making the corrections? Do we lose a year of the time of the child's life? Is it possible that in 3 months you are saying, "You know, something is not going on here?" How do you make that change so we are not looking at a year or 2 years or even 3 years?

Mr. Kitchens, when you say, you know, we have—you know, I am sorry to say that a lot of my under served schools in my district—there is a big dropout. It is probably 45, 50 percent. That is unacceptable.

And I know in the city, New York City, in Brooklyn, they have been able to track these kids and they actually bring them in to—I am not going to say a precinct, but pretty close to it, and they have the teachers there. They are going to make sure that these kids continue their education while they go to an alternative school so they can get them back into the regular school.

One of the things they said, though—the kids didn't want to go to a regular school. They like the alternative school because they got more attention.

So I will go back to my original question now. How long does the data come in when you are tracking the teacher and the child? And where do you see about that time—you know, what has—needs to be moved to help both of them? I will throw that open to everybody.

Mr. KITCHENS. I would love to answer that question. I fundamentally believe that we have to retool our schools at the school site, at the classroom level, to deliver data in near real time, that we have to become actively engaged in developing formative assistance, that we assess our students on a fairly regular basis within the year, that we point out where they are having problems, that we establish a common vocabulary for what we teach, so that we can articulate between institutions and between classrooms and on behalf of the students to make it easy to understand a common vocabulary that we can apply.

We have actually received a grant from an institution in Oklahoma, a foundation called The Inasmuch Foundation, to do that very thing. I think that being able to understand in a common way, for parents to understand where their children needs help—or need help, in reading comprehension, in word attack skills, and that sort of thing, and to make it that simple for people and to support teachers as well.

We need to move data in near real time fashion to whomever, to the teacher, to the student, to the parent, move data as well—we have to set some standards for what we teach and how we teach and articulate those to everybody concerned so that everybody understands what is happening with the child.

Ms. HARTLEY. I will speak to the graphs that I put up there. Those data are available typically in September, so in September

2009 we looked at those data. They are based on—primarily on tests that students took in May of 2009, the state—the Ohio Achievement Test that they took.

And those graphs basically measured the 2009 results of students with their predictions, and so their predictions are based on their longitudinal test history. We see those once a year, and that is unfortunate. If it were an ideal world, I would have that data every week so that I can, you know, constantly evaluate how I am teaching and the things going on in my classroom.

Unfortunately, you know, the state test is given once a year, and with the data system that we use, that is the type—that is the level of test that is needed to calculate that type of growth measurement.

Mrs. MCCARTHY. Okay.

Ms. HARTLEY. But you are right, there is a definite need for more immediate timely information.

Chairman MILLER. All right. Thank you.

Mr. WENNING. Oh, I am sorry. What Mr. Kitchens described is exactly what could be, and the fact that that is not the reality in most schools in the United States is probably the single biggest reason that we have been flat for so long in performance.

We are holding folks accountable, but we don't give them the basic tools and information they need to actually get the results we are expecting. And that fundamentally is what this longitudinal data is—should be used for, not compliance, but rather to provide the kind of support that educators need and deserve in real time about their students to engage constructively in education.

Chairman MILLER. Thank you.

Mr. REIDENBERG. If I may also just address the longitudinal aspect of it, because I think your question was focused on the immediate term, how do you bring it into the classroom right away. One of the aspects that we observed with these databases is they are being set up precisely to archive data over time. How long? What happens with the old data?

For it to be valuable to come up with new curricula, new standards, new ways of measuring performance, there needs to be a commitment for a extended period of time. We are talking 20 years. And I think it is an important question that is not really being asked.

Are states—is the federal government—willing to fund for 20 years the maintenance of these systems? If they are not, if the commitment is not there now for doing that, then how will the privacy questions be addressed when several years', 5-, 10-years' worth of data is sitting there, and all of a sudden the state decides, "Oh, that didn't work. It didn't help us answer these questions about why the school has been failing, so now we are going to stop it." But the data is still there.

Chairman MILLER. Mrs. Biggert?

Mrs. BIGGERT. Thank you, Mr. Chairman.

And I am sorry I have been in and out and—so I hope I am not asking the same questions.

But, Mr. Wenning, in your testimony you demonstrated the ability to examine the data by subgroups, including students with IEPs, and I think and as you know, one of the biggest challenges

under the former NCLB and now the ESEA—one of the biggest challenges is how to measure achievement for special needs students.

And I know that we have—you know, we have heard all the stories from some of the teachers about how concerned they were having to give the kind of tests that they did to these students. And given that your state's data system can measure student growth, how do your districts use this data to improve instruction for these children? And do you use the IEP?

Mr. WENNING. We do, and of course, the state assessment is one data point for any student, including those with disabilities. And so what we do is provide the information on student growth rates for students that are on IEPs, and that information can then be interpreted by schools and districts to understand how well their children are doing based on where they began and compare that to others and benchmarks so they can understand whether their students with disabilities are growing faster or more slowly than the next school next door or in any district, and then allow them to benchmark where they see the best performance happening.

That summative assessment that we administer at the end of the year is only so useful for these purposes, but we want to make sure that any assessment we use—and this is a nice addition to the other evidence and learning objectives in a child's IEP so it is one part of a body of evidence.

But importantly, it does allow any educator to understand how well their child on an IEP is doing compared to any other child on an IEP, controlling for where that child began. So again, that initial starting point is the most important aspect of this.

And so it is used to better inform whether their practices are actually producing the results they expect.

Mrs. BIGGERT. Okay.

Then, Ms. Hartley, do you have anything to add from a classroom perspective to this issue?

Ms. HARTLEY. Sure. Interestingly, this year I have a sixth grade inclusion math class that I have. About half the students in there are on IEPs. And they will take the state test along with everyone else.

And you know, our level of expectation—when I say our, I have a special education teacher that co-teaches the class with me. We have high hopes for how they will perform on the Ohio Achievement Test, but our true expectations is that we make positive growth with every single one of those students—that, you know, the student who is predicted to score 340, you know, realistically could pass on a good day maybe, but if, you know, he or she scores a 390, which is still not passing, we have made a lot of positive growth with that child. That is going to be a success for us.

And so as you look at some of these policies, that might be something to look at when it comes to special needs students. Where is it we really need for them to end up? Do we really need for them to score that 400 on the state test, or do we need for them to show growth?

Mrs. BIGGERT. I think that that is one question that I have been asking, should we just use the IEPs in that case. But then, Mr. Reidenberg, you know, there—you have been talking a lot about

the significant privacy concerns that you discovered in looking at the student data systems across the country.

And do you think that this would put a kibosh or do you think that this—using the IEPs rather than just the testing?

Mr. REIDENBERG. I think including the IEPs on an identifiable basis at the level of the state is a risky proposition, because there will be a state where there is a data leakage. It will happen. And when that happens, I think it will alarm significantly the parents of classified children.

In my district when I was serving on the school board, we saw experiences where parents were very reluctant to have their children classified, because they didn't want them labeled. And we saw instances where parents wanted their children classified because they wanted the 504 accommodation for testing.

And if that kind of data is fed into a permanent record, so to speak, I think it will certainly have a distorting effect on the goals that the IEPs are designed to achieve and the goals of the 504 accommodation in ways that I don't think we can anticipate right now.

Mrs. BIGGERT. What kind of a breach would cause that concern?

Mr. REIDENBERG. All it will take is for a state official to lose a laptop that has all the information on IEPs from kids throughout the state, or 10,000 kids in a school district.

In Nashville, when Nashville had its data breach, I can check whether Tennessee included—whether students had IEPs. But when the data set was put on the Internet without security, if it were a state that was recording IEP status in the state-level database, that would have been out to the world.

Mrs. BIGGERT. Thank you.

Chairman MILLER. Ms. Woolsey?

Ms. WOOLSEY. Thank you.

This has been so interesting. Thank you, witnesses. I am not going to repeat the questions everybody else asked, so I am going to get to—I decided that I was going to ask the questions that parents would ask. So I think we need to know—parents want to know how is my child doing, is my child learning, is my child keeping up.

And they need to be, I believe—parents need to be taught and trained how to read the data. I mean, this is just going to be a lot of stuff to a lot of parents.

And there is a lot of parents that I know in my district—they get a lot of their information from their teachers over their computers, so we have to bring in a whole group of parents that don't even have computers, if that is going to be necessary.

So how are we going to treat these parents and—so that they can be partners in this? I know we are talking about finding out what are the better teachers, and of course every parent wants their student in the better teacher's class and in the better school, but our goal is to make all schools good. But can you talk to me about that?

And another thing. Maybe each one of you could tell me what social service data do you consider pertinent so that we can actually educate the whole child. I mean, because there is information that needs to be taken into account.

I see, Mr. Kitchens, you got excited to answer this.

Mr. KITCHENS. I think it is extremely important to train parents in this day and time, and I think common language issues about having it easily understood, what we are trying to teach their children, is extremely important.

I mean, we can get lost in "educanese"——

Ms. WOOLSEY. Yes.

Mr. KITCHENS [continuing]. So to speak. And we need not to do that. We need to be very direct and be able to create reporting, what I will call parent-friendly, student-friendly, teacher-friendly reporting, about what we have taught, how successful we have taught it.

And I think that, you know, when you think about a common language, I want you to—I want to give you this thought, that really the way we learn, when we learn, it is kind of like in a hierarchy, if you kind of go back to the way people learn issues when they are in school, how do students learn, in what order, in what sequence.

And there is kind of an order and sequence in a lot of ways, not totally, because we learn in differing ways. But there is a common language, I think, that can be developed that is hierarchical that could—people could follow—people—parents could follow.

Ms. WOOLSEY. Right.

So, Mr. Wenning, do we think parents care if it is value-added or growth model?

Mr. WENNING. No, I don't think——

Ms. WOOLSEY. What do they want to know?

Mr. WENNING. Parents are very clear about what questions they want to answer, and you hit them right on the nail—how much progress is my child making; is it good enough for them to catch up or to keep up if they are already there, and if not, what are we going to do about it; and how good is the school at serving my child.

Those questions are of interest to every parent. And we are very deliberate in stating that that is the single most important customer for this information. And it is why we are very deliberate of our language.

And Mr. Kitchens is exactly right. It has got to be clear. It can't be 15,000 districts using different language for their parents and every school in the country, and that is why it is so important for the state to set the tone as well, so it is not just a few districts that are able to do this, but we get to a national conversation.

And of course, that means longitudinal data, and that means some risk on privacy. But this is an incredibly important leveler for our parents to engage, and we need to be leaders in closing this digital divide so that every parent has access to this high-quality information that allows them to constructively engage in their schools.

Ms. WOOLSEY. Ms. Hartley?

Ms. HARTLEY. I guess I would like to come at this question as a parent. I have a son who is in fifth grade who is a gifted student, and my fear for him is always that he is not going to be challenged enough.

Ms. WOOLSEY. Right.

Ms. HARTLEY. And so you know, as a value-added specialist, I obviously have a whole wealth of knowledge and can look at his information and come at it from that standpoint and support his teachers and his learning and help him make the years with the growth every year that he needs to make.

And that is important for those students as well. I think sometimes we think about those kids that need to catch up and engaging those parents, and those are definitely—all parents are important to engage in the conversation.

From a teacher's standpoint, I have in the past used value-added reports with parents. They tend to come at it—they are a little confused, and I think the confusion comes from the culture that they went to school in.

Education traditionally did not necessarily measure growth. We give kids tests and how you score on the test is your measure. It is an achievement measure. We didn't necessarily measure, you know, this is where you came in to the chapter, this is your understanding of this concept now and this was your understanding at the end of the chapter.

We are not necessarily a culture that is used to looking at growth measurements in schools, and so I think that that is probably an important piece that we need to involve parents in, understanding measurement of growth in schools and not just achievement scores.

Chairman MILLER. Mrs. Davis?

Mrs. DAVIS. Thank you, Mr. Chairman.

Thank you all for being here, and I certainly hope I didn't miss this in being out of the room for a little while. I am particularly interested in teacher evaluations.

And yet I do believe that we have not given teachers enough of what they need to be able to make the adjustments in their classrooms with the kind of information that they are provided.

I am wondering—and perhaps this is to you, Mr. Wenning—what is it that is going on in addition to the data that is making it possible for teachers to be able to make those adjustments? Is it particular training that they are getting?

One of the things that we know about some school systems is they have a very good strong collaborative model, and I guess this goes internationally as well, where teachers mentor one another. They talk about their students. They have time to do that. They are not just in their classroom, you know, by themselves all the time.

So what is it that you think is really critical that is more dynamic so that the data systems actually work for teachers in a way that they can make the changes that are required to be certain that kids can be more successful?

Mr. WENNING. That is just an essential question. The keys to this are providing that result very quickly, and it has to be over time, because actually we are interested in progress, not just a snapshot. And that is why the longitudinal aspect is so important.

Immediately, though, that has to be connected to an instructional strategy that works, and so that requires linking it to a battery of—and a body of instructional strategies that might be openly available in the public or might be recommended by other educators.

And the amount of digital information that is emerging now that can be connected through social collaboration, which teachers are beginning to use—I receive the chairman's tweets from this committee.

I am not sure if you are sending them, but, you know, we are all communicating readily now. It is that connection between the students' progress over time on multiple bodies of evidence to specific instructional strategies, and then allowing real-time collaboration both in schools and districts and buildings but, more importantly, across school districts, perhaps globally.

One of the things we have done in Colorado—and this is—I will plug our Race to the Top proposal—is we have created a number of ways for educators to get access to this, including an open marketplace where an educator can contribute a lesson plan or instructional strategy, and if it is highly rated by another teacher as making a contribution to their practice, it would trigger a $1,000 royalty from the state.

Now, that is a way of getting pay for performance that is not tied to personnel evaluations but rather encouraging teacher professionalism and contributions to one another's practice.

Mrs. DAVIS. Some districts believe that in order for them to bring this about, though, they need, you know, a lot more resources and money. This is something that it seems to me shouldn't overwhelm districts and their ability to actually make this happen.

I mean, how do you—I will take California, for example, and the chairman is very familiar with this. I mean, we are aware of the budget today.

We know that we have been behind in terms of data collection, and I would be curious in terms of whether you feel that there has been the kind of communication out there and strategies that states even as large as California and as complex as California could pick some of this up.

What is it that—how do we talk this through with a community that is a bit hysterical right now, and for some good reasons, because the budgets have been so impacting on helping kids, you know, move forward?

Mr. WENNING. It is a tough time. Thomas Friedman talks about the great inflection happening during the great recession.

We are cutting $260 million of state resources at the time we are adding a whole new round of accountability requirements, saying, "Hey, we are going to make these great investments in structural improvement systems, and let's do it," and try—and trying to build that excitement is challenging in this tough time.

But the Race to the Top investment and the state longitudinal data system investment is incredibly well timed. This type of really substantial investment in instructional improvement systems, which is a key aspect of the data assurance, is so well timed right now, because when I speak with teachers and parents, they are so ready for this information.

They are tired of the old way of holding people accountable and not having the basic resources they need. And so the customer is ready.

And with the investment coming from the—you know, the federal level on these particular use—you know, tools for use, not tools for

compliance or accountability, but this emphasis on instructional improvement is critical and is, again, well timed and should produce the results we are expecting from them if there—if these dollars are well invested.

But I see no resistance from educators, who are our biggest supporters, or our parents for this kind of information, because they are starving for it and haven't gotten it before.

Mrs. DAVIS. Thank you.

Chairman MILLER. Thank you.

I would just add that the—and unfortunately, I represent in some cases at various times the poorest performing schools in the state, and when you audit those campuses, those sites, sometimes they are awash in money but they are absolutely at sea as to what is happening on campus.

They don't know anything about their students. They don't have any communication with their parents. They are just managing the site for 8 hours, 10 hours a day, and then—and they are just—they just have no discussion of that.

This is really also about a very efficient use of those dollars that this information can bring about in real time.

Mr. Hinojosa?

Mr. HINOJOSA. Thank you, Mr. Chairman. I agree with much of what you said in that statement, because I, too, come from an area that is very, very poor, and with some of the highest dropout rates that I have ever seen.

But by the same token, that area has several schools that are in the top 100 best high schools in the whole country, and so I identified with what Mr. Kitchens learned from that counselor or that analyst that came in and gave you the three reasons why students who have a high daily attendance and mobility and good student discipline have the basis for learning and succeeding, because that is the difference between the schools that are having a very high dropout rate and the ones that have 97 percent attendance, they stay with that school ninth through the 12th grade, and they have a student disciplined if they must, or they send him back to the sending school district.

But together with student and parental involvement emphasizing early reading and writing literacy, teachers trained to teach in their major, and basic tools such as a good library and good science lab—that gives us 97 percent graduation rate, 97 percent going to college, unbelievable response, even though we are very poor.

But this whole thing today has been so interesting that I have missed other committee meetings because I wanted to stay and chat with you. I want to learn more, because I think this improves instruction and helps us close the achievement gap.

Mr. Wenning, my question to you is how important is it to have this student-level data, especially for measuring growth in subgroups such as English language learners and minority students?

Mr. WENNING. It is essential. Ultimately, we have an interest in equity, not just in opportunity, but now the movement to getting really equity of results. It is essential that we understand how different student groups are doing.

And in looking at that very carefully—and there is such an important federal role, because without NCLB I don't think many

states would have done this. By looking particularly—I will use the example of English language learners—we were able to break some myths in Colorado.

Our old accountability system, which was just focused on AYP and achievement, basically discouraged schools from wanting students that had a low starting point.

When we began measuring growth using the Colorado Growth Model, which only looks at where a child starts and then says, "How much progress are they making based on all other children with the same starting point," we learned something amazing about our English language learners that folks didn't want to believe until they saw the data.

And that is in Colorado, English language learners outgrow their native language peers in every grade level in every subject.

Mr. HINOJOSA. If I may interrupt you——

Mr. WENNING. Yes.

Mr. HINOJOSA [continuing]. That is very interesting. Tell me, how can we afford in the school districts to be able to put in this kind of educational accountability system? What does it cost?

Mr. WENNING. To do what we did, the costs are relatively low. Again——

Mr. HINOJOSA. What is low?

Mr. WENNING. Everything I showed you for the Colorado Growth Model and what we rolled out to across the state—it was about $2 million. Now, the——

Mr. HINOJOSA [continuing]. 200?

Mr. WENNING. Two million.

Mr. HINOJOSA. Two million dollars.

Mr. WENNING. Yes, and that is state-funded. Now, there is a large investment in the back end, and so we started talking about these state longitudinal data systems, the back end data warehouse that relates all the evidence. That is much more expensive, and that is where the state longitudinal data system dollars are going.

But in order to—our growth model—it is free to other states. So when Massachusetts adopted it, it cost them zero. It is just——

Mr. HINOJOSA. But if the states were to make the investment, then the school district could tap into that——

Mr. WENNING. Absolutely.

Mr. HINOJOSA [continuing]. And thus not have to come up with the 2 million.

Let me ask a question of Katie Hartley.

I really enjoyed your presentation. I love math. While many teachers across my state of Texas recognize the value of using data to improve teaching and learning, they would say that they do not have enough time to review data during the school day. So how often do they do it?

Ms. HARTLEY. That is a great question, and I completely agree. There is just never enough time. The principal in my building gives us a half day in the fall, and I work with each department during that half day, 3-hour time, and we go through—excuse me—achievement scores from the prior year as well as value-added growth scores.

And we use that in conjunction with some other pieces of information that we have gathered through some formative assessments

that we have the students take, and we write action plans for the upcoming or present school year at that point.

And then we have a system within our schedule during the day—all of our students have study hall at the same time, and that allows teachers then to—one teacher might have, you know, 50 students in a study hall, but that frees up another teacher to collaborate with teachers either in their grade level or in their department.

And so grade levels meet at least once every 2 weeks and departments meet at least once every 3 weeks during the school day, during that structured time, to look at data, to work on the steps in the action plan, and that is one way that our school has very creatively and effectively gone about making sure that teachers have that collaboration time.

Mr. HINOJOSA. My time has run out, but it is all very interesting. Thank you.

Chairman MILLER. Mr. Holt?

Mr. HOLT. Thank you, Mr. Chairman, and thank you for bearing with us for the full hearing here.

This is something that a number of us have been interested in for some time. Representative McCarthy mentioned that she and I are introducing today a bill called the metrics bill.

It is not because we think that this is the end-all and be-all of legislation, but we want to clearly make the point that the NCLB mandate of infrequent high-stakes tests may have some value for somebody somewhere—I am not sure—but it is pretty much worthless in informing instruction.

And I visited a school district in New Jersey not too long ago that showed me that data-driven instruction can work. This was one of the—what we call Abbott school districts. Low performing districts that fall under a Supreme Court case.

And in this district, they have in recent years now been offering frequent tests, the results of which are communicated to—throughout the school system and to the teachers almost immediately, within hours, and the teachers use the data to modify their instruction.

And rather than finding it threatening or intimidating, the teachers—or intrusive—the teachers seem to love it. And so it gets me to two questions. We have mandated these infrequent high-stakes tests—I mean, Congress has, through NCLB.

In a revised elementary and secondary act, should we be mandating more frequent collection of data? Should we be mandating data systems that are built on frequent input of data so that teachers can use that to modify their instruction?

Secondly, if we are going to specify a data system to be used, how do we make sure that the first—that it is used primarily to illuminate student instruction?

Now, it may also be used for teacher evaluation of teacher performance and so forth, but it seems to me the greatest need is student instruction, because going back to Ms. Woolsey's comment, if we are talking about accountability in schools for adequate progress, what every parent thinks, what every taxpayer thinks, what every person would think is not how does this year's fourth

grade compare with last year's fourth grade, but how are Tommy and Susie getting along.

Chairman MILLER. The chair is eagerly awaiting the answer. I think you have asked two great questions here, and I want to make sure there is time for the answer.

Mr. KITCHENS. I would like to take a try.

Chairman MILLER. Take a shot.

Mr. KITCHENS. I, number one, commend very highly what you have suggested. I believe that we need to move toward formative assessments, and that we need to move toward growth models that are formative-based, and that we need to retool our schools to do that.

Now, you know, from my perspective, NCLB as it exists right now is about taking a look at differing students over the same time frame, and it doesn't make any sense to moms and dads to do that. It doesn't make any sense to teachers to do that.

What we need to be doing is looking at the same child over time but through a formative assessment environment where we are informing instruction and articulating instructional needs to the mother and father and to the teacher, and having the teacher able to look into a program and actually suggest to the teacher maybe some—use data to suggest how to inform instruction.

And I supported NCLB, and I think there were some good things that came out of it. I think we just need to morph into this more informative model that I think would be better and would sustain us over time.

Mr. HOLT. Mr. Wenning, could——

Mr. WENNING. Thank you. Our view is that we need to have a comprehensive assessment system. We should continue the requirement to have annual summative assessment. We need to make sure we are investing in formative and interim assessment.

Summative assessment footprint can shrink and should not crowd out the formative and interim practice and assessment which is vital to provide that real-time information.

But we have both national accountability interests and local performance management purposes. Both have to be balanced. The balance is off right now.

But the annual summative assessment, the ability to measure progress in a common way, to understand what kind of return on investment we are getting from our tax dollars needs to be maintained. But it can shrink in its role so that we leave much greater room for outstanding formative practice to emerge and allow that to be the focus of educators.

But we would urge a balanced approach on this to make sure that we actually can have the understanding about how effective we are nationally in reaching that goal.

By the way, that lets us—lets the federal government start holding states accountable rather than reaching right into our schools and districts. So that is important in terms of what kind of roles we have between federal, state and local as well.

Mr. REIDENBERG. May I say something? I share the view as a former school official that continuing assessment is very valuable. But be careful what you ask for, because if you make that manda-

tory—are you talking about making it mandatory at the district level, or making reporting mandatory back to the states?

So a parent will ask you, "Why does the state have Johnny or Sally's biology test result from this week?" Because that is what happens in the state reporting systems, the test results get—that are mandated are getting reported back to a state database.

And to your second question, how do you assure that the information is primarily used for student instruction, statute. Regulation. Have these databases—the uses been defined legally. Have the restrictions on their use been defined by law so that there is a way to enforce that that is how the data is used.

Ms. HARTLEY. I would just like, very briefly—I know we are short on time—coming into teaching 10 years ago, I was a very young teacher when No Child Left Behind was, you know, implemented. And I would just like to say that——

Chairman MILLER. You are still young, and I am still stuck with No Child Left Behind. What the hell are we doing? [Laughter.]

Ms. HARTLEY. Thank you. I would just like to say that I think that sometimes we miss that, you know, No Child Left Behind, at least in my state and in my school, put a lot of emphasis on what was being taught in reading and math, and I think that is a wonderful thing.

I don't think we need to necessarily throw out those summative tests at the end of the year. I think they are invaluable in measuring whether or not schools are—and teachers are teaching the things they should be teaching and students are learning the things that they should be learning.

But I also agree that that formative piece, those assessments during the year that lead up to that summative assessment at the end of the year, are extremely important and probably would give us more valuable information that would inform instruction than one summative assessment at the end of the year.

Chairman MILLER. Thank you.

Mr. Kucinich?

Mr. KUCINICH. Thank you very much, Mr. Chairman, for holding this hearing. I am sorry I am just joining you. I was chairing a subcommittee meeting down the road.

I have read over some of the testimony, and I think that this committee certainly has some contributions that we can make in the area of privacy protections.

I was particularly struck by Mr. Reidenberg's testimony where he talked about ways that we can make it possible to protect children from disclosure of sensitive information that really is unrelated to the educational environment.

I would like to just—and also, I was interested in the value-added approach to data that one of the witnesses was discussing.

Mr. Chairman, you know, it may be beyond the scope of this hearing, but since we are talking about primarily a system which relies on a quantitative approach, is anything being said here or does anyone here have any thinking about a more qualitative approach towards education?

I mean, No Child Left Behind was totally structured based on a testing regimen. And I am interested in your experience, even though all of you are here talking about rather discrete quanta.

What about a qualitative approach? And is there anything that you would recommend based on your experience that might lend itself to measurement of qualitative approaches? Whoever would like to respond.

Mr. WENNING. Thank you, Mr. Chairman. That is an excellent observation, and quantitative and qualitative are both important. And we think it is important that as Congress reauthorizes ESEA that you consider making an investment in qualitative approaches of school evaluation.

Let me be specific about what I mean, and that is to use models like the British inspectorate system and other approaches of school reviews. In our state, we use this—you know, the quantitative accountability system. It is a good signaling device.

It tells us where there are strengths and where there are weaknesses, where there is persistently low performance and where there is persistently high performance that we can learn from.

But then to intervene in a school that is low performing, we need to send a team in of educators to really examine the practices that are being used. Those reviews can be diagnostic and they can also be summative. But they are essential if we are to actually understand why a school is either succeeding or failing.

Document that and share that information, that qualitative evidence, along with quantitative—provides a much richer perspective for educators to support improvement.

Mr. KUCINICH. Anyone else like to try?

Mr. KITCHENS. Could I respond there?

Mr. KUCINICH. Please.

Mr. KITCHENS. I think that it is extremely important if we are going—you know, we have this data, and we are using data to inform instruction. That means we need new management practices instituted in schools.

So I think that leadership needs to be potentially rethought, that there needs to be an investment in leadership and in change considered that would really have us go back and review.

Everywhere that we have seen data take hold of our economy and improve our economy, inevitably there has been business rule adaptations that had to be adopted, had to be instituted. We are going to have to do this in education, I think, in a big way.

Mr. KUCINICH. Well, I want to thank the gentlemen.

Mr. Chairman, I am through asking the witnesses questions. I just want to pose this to you. Our education system tends to promote linear thinking. The data-oriented approach that subsumes the educational system is ingrained with and conducive to linear thinking.

And I am just wondering if—in our approach that this committee uses that we shouldn't, particularly with a new administration, expand our horizons to look at what—how do you get out of this box that we are in. I am not rejecting the idea that we need measuring, but how do you get out of this box that we are in to move towards more creative, qualitative approaches?

So I appreciate that, Mr. Chairman. Thank you.

Chairman MILLER. Thank you.

Mr. REIDENBERG. Mr. Chairman, could I interject just one thing? Privacy, I think, is a critical piece for being able to think about the

qualitative side, because to the extent that these data sets—the data collections that are being managed without adequate attention to privacy—it de-emphasizes the child's dignity. It de-emphasizes very important aspects of the whole child and how that whole child is treated in the educational system.

So I think if you want to address the qualitative side, you have to have privacy as a piece of it, because that is going to help assure it for you.

Chairman MILLER. Any last comments?

Thank you very much. This has been a very good panel, I think, a very helpful panel. And I am a very proud author of No Child Left Behind, co-authored with others.

And I think that the—you know, we allowed people for 25 years to hide their failures within the systems. We knew a lot about the top 15 percent, 20 percent of the students in this country, and now we know a lot about the entire student profile.

The question is now what are we doing with that information, and this is really what this committee is working on in a bipartisan fashion, is that next iteration.

And it really is about moving to a workplace that looks more like a modern workplace, management that looks more modern in terms of the management, which is a great deal of collaboration, about sharing the responsibilities across work forces, across customer bases—in this case, it would be parents, families and the community—and seeing how you can share that information to develop that quality, to develop those tools and to develop those—what are our expectations for young people, and to have them be able to realize them.

We recognized, obviously, in the middle of No Child Left Behind, if you will, or from then to this date, that a growth model started to make more sense, that we were holding people accountable for things they had no control over, and we continue to refine that idea in this legislation.

One of the ways we refine that is through information, through data, because, again, many schools don't have a clue about the populations. They don't know what has been going wrong. They don't know what is happening in their classrooms. And that sounds like maybe a very harsh indictment. Just visit a lot of schools and you will find a lot of schools where teachers are desperate for help but it doesn't come.

And I think the data—this kind of data that we have discussed this morning really give us the best opportunity to draw out the talents and to call upon the capital that exists in schools today but doesn't necessarily—we don't polish that diamond, we don't help that process, because we don't understand the composition.

It is interesting that in 1-year's time this administration has taken the two most recalcitrant uses of data, health care and education, and moved them into a new century. And it has great peril, has great concerns, but the fact of the matter is—talk about quality. My colleague talks about quality.

If you have health insurance in my district, over 60 percent of you will probably have Kaiser. And the fact of the matter is when you see how they manage caseloads, how they manage families in the—in asthma epidemics and others—you now see the story in the

Wall Street Journal where hospitals, non-profits, profits, and Kaiser are moving across to share data systems because they recognize the mobility of their patients.

When you are in an emergency, you may not walk into your home hospital, your home health plan or anything else. And that information is critical—the medical errors problem. All of these things, and now we look at this.

What we ended up with in No Child Left Behind, which is unacceptable, is that on a single data point we take one of the most complex organizations in American society and we make a judgment on whether that school failed, the teacher failed, the student failed, the family failed, the community failed and the system failed.

There is no complex organization in our society that would make those kinds of judgments if they were doing it for real consequences. And we did it. What we have now is an opportunity to use this data to help every component of that system to be better informed and to target their talents and to strengthen their weaknesses.

To me, that is the promise of data. And it has to be carefully managed. It has to be protected in terms of privacy. But the fact of the matter is what we are starting to see is where teachers are exposed to the data in real time that is designed to help them, it becomes their friend.

It just isn't about my pay, or my hiring or my firing, it is about do I get to take my hopes and desires, wishes and talents and utilize them to—the best that they can.

And I do this at a lot of teacher sites, and I am very—I am fascinated when a teacher in California will ask a question and a teacher in Arizona will answer it, referring that teacher to a teacher in northern Michigan and to see what that response is.

We are empowering, and we are providing this kind of information. It is happening without us, but we are not getting the full benefit of it, certainly not at a school site.

That teacher may be getting that benefit, but the school site is not set up so that that teacher can then share with his or her colleagues or with the principal to enlighten the principal about a better practice or a better way for that lesson——

And so if we—you know, as we move away from a system that is very regimented to that one test day on that state test, and everything else is disregarded, hopefully we do—we are able to then realize the real potentials of the opportunity of education.

I think we also expand the school day rather inexpensively if we include after-school programs and what can be accomplished in that time frame, what can be accomplished at home if parents are informed as to what is—what the expectation is for tomorrow in class.

These are real opportunities that do not exist in most schools under the current system because of the lack of information and knowledge about the student population and the community resources that are available.

And I think over probably longer than my term in Congress, we will also understand that education is very much more of a process than a place, and data allows us—the students to take themselves

to other places to learn, whether it is the museum, or whether it is an art gallery, or it is the girls' and boys' club, or it is scouting and a merit badge and subjects in school. All of a sudden, all of this becomes possible.

So thank you. Thank you. You have been out there riding on the edge, and we appreciate that. And I think this is one of the most important things we will do in this reauthorization.

And, Mr. Reidenberg, absolutely, you raise issues that I think every member on this committee shares and is passionate about, maybe from different ideological points of view, but we are passionate about it, and—but I want to be very careful that we don't start getting into mandates of what is or is not.

There may be a reason a state wants to know about this age population for another reason. That is their decision, you know, but for the educational components, we want it used for this purpose, but I don't want to override what other decisions the states made.

But with respect to this particular data, I think you are right, we want to know how it is going to be used and for what purpose is it being gathered, because, you know, it is like people get excited about Web sites, and all of a sudden they have 12,000 of them. They don't know why they have 12,000, because they are only using four, but anyway, it is so exciting to have access to all this information. It is also costly.

Thank you very, very much.

Thank you, Mr. Roe, for your participation this morning. And we look forward to continuing to work with you as we progress on the legislation.

And all members will have 14 days to submit additional material and questions for the hearing.

And with that, the hearing stands adjourned. Thank you.

[Questions for the record submitted to Mr. Wenning follow:]

U.S. CONGRESS,
[VIA FACSIMILE],
Washington, DC, April 19, 2010.

Mr. RICHARD WENNING, *Associate Commissioner,*
Colorado Department of Education, 201 E. Colfax, Denver, CO.

DEAR MR. WENNING: Thank you for testifying at the Committee on Education and Labor's hearing on, "How Data Can be Used to Inform Educational Outcomes," on April 14, 2010.

Committee Members have additional questions for which they would like written responses from you for the hearing record.

Representative Dennis Kucinich (D-OH) has asked that you respond in writing to the following questions:

1. Mr. Wenning, you acknowledge the importance of qualitative data to the assessment of school performance and the value of the "inspectorate" model to the educational system in England; however I note that in the Administration's blueprint for ESEA reauthorization, the four intervention models for "Challenge" schools seem to lack any sort of method for qualitative data collection (to complement the quantitative data upon which such a judgment is based). In the context of assessing school and student performance, what are the consequences of giving too much weight to quantitative data relative to qualitative data? Would it not make sense for underperforming schools to have a method of school quality review that is based on qualitative data collection? Additionally, would it not make sense to have such a method of school quality review available to more than just the lowest-performing schools?

2. Mr. Wenning, school- and district-level data is only one side of the coin. When we talk about student/classroom assessment, we largely mean standardized tests and other quantitative data collection methods—NCLB has ensured that. Can you speak to the value of qualitative data collection at the student/classroom level, and

how that might be used to assess student performance without subjecting students to repeated, high-stakes standardized tests? How can Congress, as it contemplates the reauthorization of ESEA, improve state and local capacity to develop and conduct student/classroom assessments that incorporate qualitative data collection methods?

Please send an electronic version of your written response to the questions to the Committee staff. If you have any questions, please do not hesitate to contact the Committee.

Sincerely,

GEORGE MILLER, *Chairman.*

Responses to Mr. Kucinich's Questions From Mr. Wenning

1. Mr. Wenning, you acknowledge the importance of qualitative data to the assessment of school performance and the value of the "inspectorate" model to the educational system in England; however I note that in the Administration's blueprint for ESEA reauthorization, the four intervention models for "Challenge" schools seem to lack any sort of method for qualitative data collection (to complement the quantitative data upon which such a judgment is based). In the context of assessing school and student performance, what are the consequences of giving too much weight to quantitative data relative to qualitative data? Would it not make sense for underperforming schools to have a method of school quality review that is based on qualitative data collection? Additionally, would it not make sense to have such a method of school quality review available to more than just the lowest-performing schools?

The question sequence of what? so what? and now what? is useful in considering the answer to your questions. Student and school performance can be measured effectively using quantitative evidence based on summative, interim, and formative assessments. That is, such data is useful in answering the question of what is the academic performance of the school.

Quantitative evidence is also useful in answering the so what question given that such data directs our attention to inequities in academic outcomes and subjects of strength and weakness.

Quantitative evidence falls short, however, in diagnosing root causes of weaknesses in performance. Qualitative evidence of school process and practice is essential in answering the question of now what will we do to improve. Qualitative school reviews, informed by quantitative evidence of performance strengths and weaknesses, play an essential role to inform school improvement efforts. Failure to understand root causes of performance problems can set educators on a course of pursuing quick fixes that do not set a path for sustained improvement. Qualitative school reviews are useful to all schools and especially low-performing schools that will be the recipient of large investments of Federal funding for improvement efforts.

As Congress contemplates the reauthorization of ESEA, it should consider including a prominent role for qualitative school reviews to inform school improvement efforts and to evaluate the efficacy of school interventions.

2. Mr. Wenning, school-and district-level data is only one side of the coin. When we talk about student/classroom assessment, we largely mean standardized tests and other quantitative data collection methods—NCLB has ensured that. Can you speak to the value of qualitative data collection at the student/classroom level, and how that might be used to assess student performance without subjecting students to repeated, high-stakes standardized tests? How can Congress, as it contemplates the reauthorization of ESEA, improve state and local capacity to develop and conduct student/classroom assessments that incorporate qualitative data collection methods?

The design of assessments is a function of funding availability and the kinds of questions they are intended to answer. Performance assessment that incorporate demonstrations of work or simulations can provide timely and useful feedback to students and educators that drives insight and action. Assessments of student work progression through demonstrations, for example, still will yield a quantitative score based on a rubric. So the quantitative vs. qualitative distinction may be less important that the nature of the performance task that is the subject of the assessment. Large scale performance assessments that yield valid and reliable evidence are more complex and expensive than many current state assessments.

As Congress contemplates the reauthorization of ESEA, it should pay close attention to the kinds of summative assessments developed with the Race to the Top (RTTT) assessment competition resources and the formative assessments developed through RTTT phase 1 and 2 awards. These resources present a major opportunity

to invest in both large scale and local assessments that incorporate richer perspectives on student and classroom practice.

[Whereupon, at 12:33 p.m., the committee was adjourned.]