**Exploring Opportunities to Strengthen Education Research
While Protecting Student Privacy**

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Chairman Rokita, Ranking Member Polis, and Members of the Subcommittee:

Thank you for the opportunity to discuss education research and student privacy concerns. My name is Nathaniel Schwartz and I am the Chief Research and Strategy Officer for the Tennessee Department of Education.

During my five years at the department, our agency has received four grants from the Institute of Education Sciences (IES), and we have joined with Vanderbilt University to create the Tennessee Education Research Alliance – one of the first research-practice partnerships aimed directly at state-level policy in K-12 education. I also serve on the governing board for the Regional Education Laboratory (REL) for the Appalachian Region.

We are quite proud in Tennessee about the major improvements we have seen in student achievement in past years – with our state's scores on the National Assessment of Education Progress rising faster over the last five years than any other state – and we ascribe some of this progress to the ways that we anchor our work in a system of continuous research and evidence-driven improvements. For this testimony, I will focus my comments on my state's experiences using federal education research resources, along with the ways we aim to balance research needs and privacy considerations, and I will offer several suggestions for moving forward.

Tennessee's Use of Federal Education Research Resources: A Case Study
State departments of education need rigorous and meaningful research in order to function effectively. In Tennessee, we rely on federally supported research to determine our state's greatest needs, to identify and improve levers of change, and to evaluate program effectiveness. While conducting this research often relies on confidential student data, long-term partnerships with researchers and the use of standard, masked data sets can protect student data from improper access.

I'd like to begin by briefly describing an example of what this process has looked like in our state and then highlight key points, both to illustrate what works well about the federal system and what might need to change.

I spoke at the outset about Tennessee's educational gains over the past years. But we're also a state where less than one third of our graduating seniors go on to earn a postsecondary degree,

and those that don't – those that enter the workforce with only a high school diploma – average an annual salary of around $10,000 during their first year out of high school. By third grade, only one-third of our students are proficient in the reading and critical thinking skills that are crucial to their long-term success.

Changing these trends – in Tennessee and elsewhere – requires states to develop and deploy new tools to transform the interactions that take place between teachers and students. To take on this challenge, we turned to research partners at the University of Pittsburgh to help us design a state-supported model for instructional coaching. Rigorous, though small-scale, randomized research trials had demonstrated the potential of coaching programs to help teachers improve their practice, but we faced a particular challenge at the state level in determining how to meaningfully support instructional coaching across over 140 school districts, each with different structures for teacher development.

To move forward, we applied for and received a $2.5 million IES continuous improvement grant. These grants are part of a relatively recent focus from IES on long-term partnerships between researchers and practitioners. They support a research process that covers the full policy cycle—from initial design and implementation up through rigorous evaluation—and they require grant applicants to create robust structures for integrating findings into the operation of the education agency. Using the tools of improvement science designed by the Carnegie Foundation for the Advancement of Teaching, we conducted small-scale, rapid-cycle tests of different elements of the coaching model, spreading our learning across a growing statewide network of instructional coaches. In the third year of the grant, after developing our coaching model, we recruited new districts and new coaches. Preliminary analysis (as we finalize this year's assessment data) indicates that the program has led to improvements in coach conversations and teacher instructional practice. As we develop the research base in this area, it will promote the expansion of effective programs and elimination of ineffective ones, resulting in more efficient and effective uses of limited available education resources.

The work with the University of Pittsburgh helped launch a broader initiative to take on our state's challenges in early literacy. Based on the coaching model, the commissioner and department leadership created an initiative called Read to be Ready that aims to use state-supported instructional coaching to bring our student English language arts proficiency rates to 75 percent over the next eight years. Importantly, we have made rigorous evaluation an integral element of the process. Working with the Tennessee Education Research Alliance at Vanderbilt, we conduct and analyze annual educator surveys that allow us to track changes in teacher perceptions over time. Our internal research team within our department analyzes formative evaluation data and feeds the data directly back to the team that is leading the literacy programming while an independent team of researchers with the Research Alliance will conduct a rigorous quantitative evaluation of program effects.

Conditions for Success
The work that I just described, now entering its fifth year, directly aligns with the aims of our federally supported research system. It is research designed to promote innovation on a problem of practice that is highly relevant, both for the state of Tennessee and for the forty-nine other

states across the country that are all similarly focused on strengthening classroom practice to place all students on a pathway to success after high school.

So what are the key elements of this work?

First and foremost, a strong internal research team within the Tennessee Department of Education. None of this work is possible without people within the department of education who are directly tasked with making research happen and integrating findings into department operations. For nearly every major research study that our state has conducted – including multiple gold-standard, randomized control trials that are now influencing national conversations in areas ranging from pre-school to early postsecondary – our in-house researchers identified the opportunities and facilitated the work. Our research team also conducts immediate analysis on all our department's major programs and ensures that this analysis gets immediately transformed into practice. I also want to highlight that the example I shared spanned two different state commissioners. A strong internal team and research agenda helps create important consistency in a dynamic political environment.

Though vital, this sort of state research office receives little direct support or explicit encouragement from the federal government. A 2015 scan of state education agencies found that only 29 states included offices devoted to data analysis, and far fewer had employees assigned solely to in-house research.[1] At the same time, the federal government devotes around $50 million per year to Regional Education Laboratories that in my opinion are no substitute for in-house expertise. This is partly a function of the long and complex approval process for REL research. Two winters ago, as the REL-Appalachia contract went up for bid, our state began discussions with potential REL contractors about research around our state's Response to Instruction and Intervention program. Over a year and a half later, we are still a couple months from officially launching the work. But it is also due to the literal and symbolic distance between our department and the REL staff. We have found the staff members we have worked with in our state's REL to be highly capable and thoughtful individuals, but in order to use research to create long-term program improvement, states need individuals within their agency who have the time and expertise to grapple with the findings and their implications for practice.[2] If we want research to be taken seriously at the state level, we should devote federal resources to incentivizing state research offices and to building the expertise to staff these offices.

Second, the work in Tennessee depends on IES support for long-term partnerships between our state department and independent research partners. IES continuous improvement grants, launched in 2013, are quite unique and represent a new way of thinking about educational innovation while still emphasizing rigorous research. The full set of grants that IES provides in support of applied partnerships between researchers and local educational agencies, including both continuous improvement and other partnership grants, have the potential to create long-term

[1] Schwartz, N. (2015). "Making Research Matter for the SEA." In *The SEA of the Future: Building Agency Capacity for Evidence-Based Policymaking*. The Center on Reinventing Public Education. Online at: www.bscpcenter.org/resources/publications/SEAF_5_11.2015_final.pdf.
[2] Harris, D. (2017). "Make It Local with In-House Researchers." *Education Next* blog post. Online at: www.educationnext.org/make-it-local-with-in-house-researchers.

expertise and capacity at the local level. Currently, these grants make up only about 12 percent of the total IES portfolio.

Third, I want to highlight the existence of the Tennessee Education Research Alliance. This new partnership between the department and a higher education institution is one of only a few state-level research organizations aimed at promoting long-term educational improvements through rigorous research, and it significantly augments our state's research capabilities. Just as states need strong internal research teams, we also need a ready set of knowledgeable partners who can provide an independent voice and ties to the larger research community. Equally importantly, the Tennessee Education Research Alliance manages longitudinal data sets that we have jointly created to facilitate the research process while closely guarding student privacy. Working with Vanderbilt data scientists, our department has put together systems to consolidate department data and allow this data, with student names and IDs removed to provide privacy and anonymity, to be used within a secure environment by approved education researchers across the country. Without this kind of system, we would be unable to conduct anything like the breadth of research that we currently have in place, both because of the amount of support work that it would require on the part of TDOE and because of the difficulties we would face in ensuring data security.

This speaks to the final element that contributed to the success of the example I described – specifically, that Tennessee has a system for securely and easily accessing longitudinal data for research purposes. Most of the education research that we are discussing here calls upon data that has been collected by schools for program needs outside of research. For research purposes, the key requirement is to design systems that ensure security once the data enters into the hands of researchers. In Tennessee, we work only with researchers who have strong track records both of nationally recognized research and secure data use. The researchers then sign well-vetted research agreements and conduct their research using secure environments and standardized, masked data sets. This is why the process that I described with the Tennessee Education Research Alliance is so very important. We need to be able to create and maintain systems for accessing research data and supporting responsible data use that do not place unsustainable demands on state agencies.

That need informs our state's stance on the intersection between data privacy and research. Schools collect a tremendous amount of data in this day and age, and we strongly believe that each additional data element that gets collected on our students must be balanced by privacy concerns. This means carefully scrutinizing data collection at all levels and collecting only what is necessary. However, this is quite different than prohibiting the use for research purposes of previously collected data. Instead, there is a place for explicit encouragement from the federal government that student data can and should be used by researchers when secure data handling practices are followed, although I will argue below that there are useful clarifications that might be provided by the federal government to make this more likely.

Recommendations
The points above lead to several specific recommendations as to how the federal government might improve upon its resources for research to increase the likelihood that these resources lead to innovations and improvements in our educational system.

1. Preserve the federal role in supporting research to maximize the impact and effectiveness of federal, state and local education programs.

   The quality of education in our country depends on decisions made at the state and local level. With so much riding on these decisions, we must do everything possible to ensure that these decisions are made from a perspective of strong evidence and information. Federal support for research increases the likelihood that those of us working in states can learn what works and ensure that we are making the best use of limited resources.

2. Provide greater support for internal research teams within state departments of education.

   Strong applied research work depends on the presence of local researchers inside education agencies who have the knowledge and expertise to conduct analyses, seed new research, and incorporate study findings into the work. The federal government could take several steps to help build these offices. One possibility would be to offer direct funding for this purpose. Another would be to create training programs designed specifically for state and local education agency researchers. Finding the right people to staff state research offices is a constant challenge. Currently, IES offers a number of training grants, but the vast majority end up training research professors rather than agency researchers. Federal support could seed applied masters programs – that include coursework in areas like statistics, psychometrics, research design, work with large data sets, and a practicum in a policy environment – to create a trained and ready workforce for internal research offices in state and local agencies.

3. Build the emphasis within IES on long-term, rigorous research partnerships that will produce tangible state and district-level improvements and innovations.

   To advance research that directly supports our agency, IES should increase the funding for grants that create or support formal partnerships between educational agencies and academic researchers. Here, I am referring to grant programs that include "Evaluation of State and Local Education Programs and Policies," "Continuous Improvement Research in Education," "Researcher-Practitioner Partnerships," and "Low-Cost Evaluations of Education Interventions." In particular, IES could do more to support long-term organizations like the Tennessee Education Research Alliance that build expertise, knowledge, and data security at the local level.

4. Encourage secure use of educational data for research purposes, and clarify guidance about the use of data that crosses administrative agencies.

   Student privacy matters, and states and districts can put strong systems in place to ensure that student private information is kept confidential when used for research purposes. In Tennessee, we have been able to create these systems by building partnerships that include strong data security and responsible and responsive data use. At the same time, there are certain areas where we have struggled to make sense of regulations due to vague or conflicting guidelines around data privacy, particularly in cases where data ownership crosses executive administrative agencies. For example, while most of the educational

data handled by our agency falls under the jurisdiction of the Family Educational Rights and Privacy Act (FERPA), our department also handles subsidized lunch data that is technically owned by the Department of Agriculture, and student health data from the Department of Health. Each of these is subject to a different set of restrictions. Making sense of the ways that this data can or cannot be used for research purposes has been challenging, and different localities have interpreted restrictions very differently. A next crucial step for the federal government would be to bring together the different executive agencies that handle education data to issue joint guidance about research use and data privacy specifically relating to data that crosses agency boundaries.

Thank you again for the opportunity to participate in this hearing and for your consideration of my testimony.