



Testimony of Dr. Jennifer House
Vice President of Strategic Relations
Classroom Connect, Inc.

On Behalf of the
Software & Information Industry Association

Before
The House Commerce Committee
Subcommittee on Telecommunications and the Internet

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Good Morning Mr. Chairman, Ranking Member Markey, and members of the Committee. Thank you very much for the opportunity to address you today on the subject of education technology. My name is Jenny House, and I am Vice President of Strategic Relations for Classroom Connect, an education company that provides online curriculum products and professional development solutions to support K-12 standards-based teaching.

I am also pleased to represent the Software & Information Industry Association as chair of SIIA's Education and Workforce Development Policy Committee. SIIA is the principal trade group of the software code and digital content industry, with a membership of 1,000 companies building the digital economy. SIIA has long been at the forefront of efforts to integrate technology into education and education policy.

In sharing SIIA's perspective and policy goals, I bring my own 30+ years of experience as a teacher, school and district administrator, and hardware and software company executive. While SIIA member companies and their technology serve the entire broad education and training market, my comments will emphasize elementary and secondary education to which I have devoted my professional life.

National Education & Workforce Strategy

First, let me thank this Committee for its strong support of education and education technology. Federal leadership and investment has been critical to local and state efforts to bring the benefits of instructional technology to all students, especially those in the most disadvantaged communities.

In today's information age and global marketplace, intellect and innovation give the United States its competitive edge and make a highly educated and skilled citizenry essential. This fact is no more clearly demonstrated than in the high technology industries now driving the global and digital economies. However, the insufficient availability of skilled workers recently forced the nation's high-tech companies to request a temporary increase in the number of foreign-born professionals allowed into the U.S. to meet their workforce needs.

We all agree this short-term fix is inadequate. Our nation needs a comprehensive, national education and workforce development strategy that ensures all students achieve to high standards and all citizens gain 21st Century knowledge and skills. Allow me to speak to two core elements of this solution: education technology and federal leadership and investment.

Vision of Education Technology

Learning through the use of, and about, technology and the Internet are critical to meeting our education and training goals. As uses are refined and integrated, technology and the Internet are encouraging innovation in education structure, policy and practice. The result is a transformation of teaching and learning, and improved educational efficiency, opportunity, effectiveness and student achievement.

These educational improvements can be organized around three technology benefits: enhanced learning, 21st Century skills, and administrative effectiveness.

- **Enhanced Learning.** Software and web-based learning provide tools for the ideal student-centered learning model. Access to real-time, real-world content and exploration engages the student and drives the thirst for knowledge. The Internet provides anytime, anywhere access to courses that integrate rich curriculum, expert instruction, and global discussions, and which were previously unavailable to many. And technology enables self-paced, individualized learning in which integrated diagnostic assessments are linked to curriculum in a way that best meets the unique learning interests, needs and styles of students.

Classroom Today provides a comprehensive framework of thematic units which cover topics related to a teacher's curriculum. Through an interactive educational Website, *Classroom Today* provides a natural way for teachers to integrate up-to-the-moment information from and interactivity of the Internet into the classroom on a basis consistent with individual teacher calendars. The Website is used by subscribing classrooms to explore and research topics in science, social studies, math, and language arts guided by a series of open-ended questions. Each unit features curriculum content wrapped around pre-qualified Web resources and supported by lesson plans, activities, and tools such as links to national and state standards as well as related assessment strategies.

- **21st Century Skills.** Success today requires a set of abilities not necessary a generation ago. Technology is critical to providing students with this wide range of 21st Century knowledge and tools. These skills begin with basic technology literacy, including the ability to find and analyze information on the Internet. Technology also facilitates higher-order cognitive skills such as problem solving and the ability to draw and communicate conclusions. Finally, it encourages collaboration and the ability for self-directed and life-long learning. Many will only acquire these skills in a timely manner if given access at school.

An example of this is Classroom Connect's unique *Quest* adventure learning series, which provides students, teachers and parents with the opportunity to follow an expert team, in real time, on their travels around the world on an educational exploration. Twice a year for four to six weeks, a team of adventurers and curriculum experts explore a mystery such as what is taking place today in the Mayan ruins in Belize. Students around the world are communicating with scientists on site and other related experts to solve the mystery of what happened to the Mayan civilization. The team on site communicates via portable computers and satellite technology carried on their backs for student viewing the next day. *Quest* subscribers direct the journey as they vote on the team's next destination and fact finding strategy and email the adventurers with questions, ideas, and insights during the trek.

- **Administrative Effectiveness.** Technology also brings efficiencies to educational management. The Internet opens the market to non-traditional providers, thus enhancing education competition and student choice. It facilitates communications between the school and community, thus empowering parents to participate in their children's education (provided they have Internet access). Technology eases efforts to measure and monitor student progress, and to improve data-driven decision-making and accountability. The result is effective data management, procurement savings, and other cost efficiencies long enjoyed by business.

I encourage you to review the Education Anytime, Anywhere section of SIIA's *Trends Shaping the Digital Economy* report for more details and case studies (<http://www.trendsreport.net/education>).

Continued technology advances will further enhance this value through hand-held computers, e-books and other low-cost devices, two-way interactive video and voice streaming, and wireless technologies. At the same time, research and experience will inform our design and use of technology to improve teaching and learning and increase achievement. Many examples of success already exist. SIIA's *2000 Research Report on the Effectiveness of Technology in Schools* reviewed existing research and found that technology increases educational opportunities and student achievement, and that the degree of effectiveness depends on the match between such variables as student needs, software design, education goals, and educator training. While more research is needed to further refine our understanding, a primary goal now is to develop and implement scalable and replicable models that allow the effective integration of technology for all teachers and learners.

Achievement of these technology-driven educational improvements requires that all schools and students have access to high-quality digital tools and curriculum, and that this technology is effectively integrated into teaching and learning.

Education Needs

The nation's elementary and secondary schools need federal assistance to achieve these education technology goals. They have three primary needs: infrastructure and access, software and digital curriculum, and well-trained educators.

In addressing these needs, federal assistance must recognize the unique challenges schools face in funding technology. It is a relatively new item in a budget crafted at the margin and slow to change. Technology is a relatively expensive item in a budget that devotes most resources to personnel and operations. And technology is a hybrid item in a budget that categorizes costs as either capital or recurring. As a result, our nation's K-12 schools spend only about one-twentieth per student on technology as does the private sector spend per employee. Federal investment is critical to ensuring the necessary investment as local communities and educators adapt to this change.

Infrastructure and Access. Schools need assistance in obtaining the appropriate telecommunications and technology infrastructure and access, including connectivity and hardware. This is especially the case in many urban and rural communities where access is more difficult and more expensive to obtain, and of course for high-poverty districts that are severely lacking in resources.

Software and Digital Curriculum. Schools need high quality software and digital curriculum to reap the benefits of technology and the Internet. These tools must be learner-appropriate and safe, matched to education needs and standards, incorporate effective pedagogy, and be designed for fluid and effortless integration into the curricula and school management. Educators have neither the time nor resources to develop these tools nor translate raw content into curriculum.

Well-Trained Educators. Perhaps most critical to the success of education technology, schools need educators that are able to effectively integrate technology into the curriculum. Technology provides exciting new tools that can transform a teachers methods and role, and invigorate their experience. With this paradigm shift at an early stage, educators need training and practice. Studies repeatedly identify the lack of teacher training as a key barrier to the more effective use of technology.

Public-Private Partnerships

Public-private partnerships and federal leadership and investment are critical to the nation's ability to address these education needs and transform the vision of technology into reality for all students. Federal leadership serves as a catalyst for innovation, reform and improvement in our nation's education and training system, while federal resources leverage the state, local and private investment necessary to fuel this national effort. At the K-12 level, federal investment provides more than one-third of the resources used by local schools to access, acquire and integrate technology.

The E-Rate has been critical to ensuring our most economically disadvantaged communities have access to the nation's telecommunications infrastructure that serves as a base for their educational efforts. The yearly funding requests, now double the FCC-set cap of \$2.25 billion, are testament to both the importance of these resources and to our nation's growing commitment to technology solutions.

U.S. Department of Education grant programs are also an important element of federal K-12 support. These grant resources enable local schools to leverage their telecommunications and Internet access through the software and online learning tools important for teaching and learning innovation and improvement. For example, many schools supplement federal grants with state and local funds to subscribe to Classroom Connect's services.

At Classroom Connect we believe educators need a broad range of instructional techniques and technology proficiencies to teach and inspire their students. Professional development is key to successful implementation of any curriculum in the schools, and it is critical in the relatively new arena of integrating technology into the curriculum. Our professional learning suite fulfills these needs with a tailored mix of Web-based learning, onsite instruction, conferences and publications. We have developed our *Connected University* online professional development on a foundation of anywhere, anytime, any pace learning for teachers and administrators. We are participating in four different federally funded projects through the Preparing Tomorrow's Teachers To Use Technology (PT3) grants. These are exemplary public-private partnerships which include schools of education, K-12 schools/agencies, and commercial entities such as Classroom Connect. These projects prepare

teachers to effectively incorporate technology into teaching and learning while developing standard of excellence, and prepare the best educators to teach our nation's future leaders.

We also participate in several important not-for-profit partnerships as well. Our partnership with the Stanford Research Institute (SRI) is analyzing the effectiveness of online learning and teaching that benefits the entire educational community, commercial as well as public. A second partnership is with the SchoolFirst Foundation, which is using our products in some of the nation's disenfranchised schools to study the impact of online learning for students from low socio-economic neighborhoods. We also have content partnerships with the American Museum of Natural History, the Library of Congress, and NASA.

Policy Solutions

SIIA strongly encourages the Congress, working with the Administration, to enhance the federal support and leadership necessary to realize this education technology vision and ensure all students achieve to high standards and gain the necessary 21st Century knowledge and skills. Such policies should promote public-private partnerships that help provide all schools and students with access to high-quality digital tools and curriculum and their effective integration into all appropriate aspects of teaching and learning.

These policy principles are largely reinforced by the findings and recommendations of the bipartisan Web-Based Education Commission, led by former Senator Bob Kerrey and Congressman Johnny Isakson. I encourage you to review their recent report, *The Power of the Internet for Learning: Moving from Promise to Practice*, as well as SIIA's testimony to the Commission (<http://www.siia.net/sharedcontent/govt/issues/edu/SIIAWebComRecs.pdf>).

In general, it is the view of SIIA that public policies should: (1) neither prejudice nor inappropriately favor technology and web-based education; (2) rely to a great extent on consumer empowerment and market competition; and (3) make the long-term investment in technology, including infrastructure, research and development, and teacher training.

More specifically, SIIA encourages federal policies that seek the following with regard to K-12 education:

- Target federal education resources to national priorities, including technology, math and science, teacher quality, and disadvantaged students. In return, hold schools and educators accountable for ensuring all students achieve to high standards and gain 21st Century knowledge and skills.
- Increase federal investment in education technology, and ensure those resources are both flexible and stable to empower local districts to address their unique technology needs and goals. The resulting demand creates competition among publishers and spurs technology innovation, quality and reduced prices.
- Continue and expand efforts to ensure universal student and community access to telecommunications infrastructure and Internet technology via the nation's schools and libraries. As I mentioned, the E-Rate has been invaluable in providing connectivity and access for our

nation's schools, libraries and students. Any efforts to achieve this goal and close the digital divide must ensure our neediest schools and libraries continue to have dependable telecommunications access that is protected from the often unstable federal appropriations process. Many classrooms, particularly in the most disadvantaged communities, remain to be connected.

- Avoid regulations that inappropriately create barriers to the use of education technology. Recognize that a supportive and dynamic policy environment is needed for technology to emerge successfully from today's challenging and relatively early development stage. Rely on balanced solutions, public-private partnerships, industry self-regulation, and consumer education and local communities to ensure student online safety and privacy.
- Increase investment in training all educators to effectively integrate technology into the curricula, including pre-service and in-service training. Encourage public-private partnerships that take advantage of the expertise of companies like Classroom Connect and their ability to provide web-based teacher training and facilitate online support groups.
- Target federal R&D to address gaps in private investment, including unserved niche markets, basic cognitive research, and large-scale empirical evaluations that identify effective models. Emphasize public-private partnerships to ensure the most relevant research is funded, findings directly influence product development, and government does not distort the incentive for private investment through inappropriate competition.

Conclusion

In conclusion, Mr. Chairman and Members of the Committee, SIIA and its member technology companies understand first-hand the importance of a highly-skilled workforce. And we recognize the need for a comprehensive national education and workforce development strategy that ensures all students achieve to high standards and all citizens gain 21st Century knowledge and skills. As my testimony has outlined, the elementary and secondary education reforms and innovations created by technology tools provides a critical target for federal leadership and investment. Public-private partnerships such as those being undertaken by Classroom Connect should be core to this strategy. On behalf of SIIA and the high tech community, I extend our commitment to work closely with you to enhance this partnership and realize our nation's educational and economic goals.

Thank you for the opportunity to testify. I am pleased to answer any questions.