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ABSTRACT

This paper contains the transcript of the speech of United States Secretary of Education Richard W. Riley delivered at the National Press Club, Washington, D.C. on July 29, 1998. The focus of the speech was the promise and possibilities of technology in education. Discussion includes the following: the "digital divide" in technology use between those who have access to computers and the Internet and those who do not; the ability of technology to be an equalizer of educational opportunity; outlook for jobs requiring computer skills; examples of technology-based classroom instruction; benefits of technology for teachers, students, and overall academic achievement and motivation; use of computers for at-risk students; the E-Rate, or Education Rate, the Clinton Administration's initiative to provide affordable telecommunications access to all schools; the Telecommunications Act of 1996; the Universal Service program and increased telephone service charges; opposition to the E-Rate; resources on the Department of Education's Web site; and the need for teachers to be technologically literate. (AEF)

Remarks as prepared for delivery by
U.S. Secretary of Education Richard W. Riley

Technology and Education: An Investment in Equity and Excellence

National Press Club
Washington, D.C.,
July 29, 1998

Webcast of the Secretary's speech.

Thank you Senator Glenn. I am so grateful that you could take the time out of your busy schedule -- between being a Senator and preparing to return to space -- to be here with us today. I am especially delighted by your presence because I can think of no American who better exemplifies the link between education and technology -- and whose life has been a constant quest of new challenges, new experiences and, perhaps most importantly, new knowledge.

On that note, let me say what a great delight it is to address the many students who are taking part in the National Young Leaders Conference who are here in Washington to study our government. I also want to welcome those education and technology leaders who are with us today -- as well as the students, teachers, librarians, and others who are joining us across the country on the Internet.

I am very pleased -- and I think it is so appropriate -- that this event, which focuses on the critical relationship between education and technology, is being Webcast via the Internet. It is an example of the kind of opportunity available to those who might not otherwise be able to participate in these kinds of discussions.

My friends, I come before you to talk about the promise and the possibilities of technology in education. I want to assure you that this future can be a rich and limitless one, full of opportunity for students of all ages. But I also want to make clear that to achieve this kind of bright future requires a real commitment by this nation to end the great disparity that exists between those who have, and those who do not have these exciting tools for learning. We have the potential to do great things with technology in our schools, but it is a potential still largely unrealized.

Right now, if I had to describe the application of technology in our nation's schools, I would say that it is a tale of two worlds. One world is a world of families and communities that have the best in educational technology and are reaping the benefits.

In the other world, the use of technology in schools to achieve maximum educational benefit is usually little more than a dream. Figures from the

Commerce Department -- just released -- confirm that we are in the midst of a severe "digital divide" -- a gap between those who have access to computers and the Internet -- and those who do not. The figures show that it is a divide centered largely on racial, economic, and other demographic lines. But it is a divide that does not have to be.

The Commerce numbers show, for instance, that White Americans are more than twice as likely to own a computer as African Americans or Hispanics, 41% to 19%. Households earning more than $75,000 have more than 75 percent computer ownership, while households with incomes under $10,000 have 11 percent or less computer ownership. And Americans with a college degree are almost ten times more likely to own a personal computer than those with eight years of school or less.

The statistics are equally disappointing in our schools. Too many of our nation's classrooms lack the resources and connections to hook into these effective learning technologies. According to the National Center for Education Statistics, although 78 percent of our public schools are now connected to the Internet, thanks to communities and schools working together, only 27 percent of classrooms have access. What is more, in low income communities and minority neighborhoods, only 13 percent of classrooms have such access.

Now, it doesn't take a statistician to figure out what all these numbers mean. We, as a nation, are missing the opportunity of a lifetime. It is the opportunity it offers a student living in a rural area to experience the greatest museums and libraries in our cities and around the world. It is the chance a student with a disability has to gain access to all kinds of information.

It is the ability of all students -- no matter whether rich or poor, or whether they are from a small town, a city, a rural area, or a suburb -- to learn at the highest levels with the greatest resources and have the promise of a future of real opportunity. This is the potential of technology.

Quite simply, technology can be one of the greatest equalizers of opportunity that has existed since the first textbook was distributed in our nation's public schools. But a single computer in the principal's office won't allow kids to benefit from these learning technologies. We need to get the technology to where kids learn -- in the classroom.

I believe it is time to think seriously about the direction in which we want to go and the kind of investment we want to make in our nation and our children's future. It is time to break the cycle of technological inequity -- not perpetuate it.

Today's students are the first generation that will be expected to have technology skills for careers and future success. These skills are the "new basics." By the year 2000, 60 percent of all jobs will require high tech computer skills. Over the next seven years, according to the Bureau of Labor Statistics, it is estimated that there will be a 70% growth in computer and technology related jobs -- jobs with a real future.

In this Information Age, information is the currency that drives the economy. If people do not have access to information or the necessary tools, they can not participate in this economy.

In some schools, students already are getting this kind of training. Covington High School in Covington, Louisiana, for instance -- and I understand that Stephanie Piranio is here from that school today -- has integrated technology into almost every aspect of learning to help students further their development of basic and advanced skills like reading, writing, mathematics, science, and geography.

In one environmental science class, students focused on cleaning up and restoring a local stream. They conducted research on restoration, worked at improving water quality and analyzed results. They wrote reports, prepared multimedia presentations, and met with local and state leaders. The Army Corps of Engineers even awarded a grant to the city, in large part due to the students' work, which it said was the equivalent of more than $50,000 in research and preparation.

The "Do-It Scholars" program at the University of Washington, is another exciting program that used technology to expand learning opportunities. High school students with disabilities who have interests in science and engineering are provided with special tools and training to use the Internet to explore academic and career interests.

One student, who was totally blind used a computer with speech output to explore the fields of biology and computer science. That student commented, "I have all of the information for school projects. I no longer have to get help from fellow students to do my research papers. In fact, a few have even asked me for help."

But it's not just students who can reap these benefits. Teachers can spend more individual time with students; they can communicate with each other and be exposed to new and engaging methods of teaching; and they can communicate with parents about their children's schoolwork.

I think a science teacher in Florida explained it best when she said that using technology to learn is "the difference between looking at a picture of a heart in a textbook, and looking at a beating heart and being able to slow it down and analyze it to see exactly how it works, step by step."

Research by David Dwyer and others shows significant links between computer-assisted instruction and achievement in traditional subject matter. Students with access to these technologies have shown better organizational and problem-solving skills when compared with students who do not have access to these technologies.

Perhaps even more important, research shows that students in schools that integrate technology into the traditional curriculum have higher attendance and lower dropout rates -- which leads to greater academic success.

This can be seen at one of our Blue Ribbon schools, Westwood High School in Austin, Texas, which has developed a comprehensive program to use technology to enhance teaching and learning. I believe Stephanie Pan is here today from that school. Westwood's SAT and ACT test scores are among the highest in the state, and the school's AP placement programs rank 20th in the nation.

The use of computers has also been shown to be an especially effective way to improve learning and educational opportunities for at-risk students, as a recent study by City University of New York demonstrates.

Significant academic improvement was found, especially in reading, when computers were provided in the homes of at-risk middle school students. The greatest improvement was shown by those who spent the most time on their computers because it helped them learn to think and express themselves, and use their time more productively.

The strong connection between technology and learning only serves to highlight the utter injustice of the continuing inequity in computer ownership and access that was confirmed so clearly in the Commerce Department statistics I mentioned earlier.

President Clinton and Vice President Gore have been working hard to end this digital divide -- and to give all young people in poorer communities the chance to use these kinds of resources and build stronger schools. One of the most important of these initiatives is called the E-Rate, or Education Rate.

Now "E" could also stand for equality or equal access -- because the fastest way I know to help close the "digital divide" is by providing significantly discounted telecommunications services for schools and libraries. This initiative is critically important because it guarantees affordable telecommunications access to all schools -- public and private.

Curiously, in spite of the great benefits it would bring to communities around the country, the E-Rate has faced a number of serious challenges. This offers a good example of how even the best ideas can get sidetracked or derailed by powerful special interests. Let me tell you what happened.

Two years ago, after months of public hearings and with bipartisan support, Congress passed, and the FCC implemented, the Telecommunications Act of 1996. This law deregulated the industry and provided telecommunications companies with broad new opportunities for growth.

Linked to this opportunity was a responsibility to continue Universal Service -- a 60-year old program that has provided affordable telephone services to some rural communities and other areas with unusually high telephone costs. The Congress also expanded this critical program to provide schools and libraries with more affordable telecommunications services through what is referred to as the E-rate. It was a win-win situation.

In exchange for their continued support of Universal Service, the long distance telephone carriers were given significant reductions in their costs through reduced access fees. Unfortunately, after the plan was enacted, some of the long distance companies sought to change the way it was funded, jeopardizing the E-rate. And some members of Congress have sought short term political gain by trying to pull the plug on the program.

The long distance companies added a surcharge to phone bills

purportedly to recover the cost of Universal Service. But we argue that they already had been reimbursed through the reduced access fees.

They also failed to distinguish between all Universal Service charges and the E-Rate. One large long distance company put a 95 cent surcharge on telephone bills. But only 19 cents of that was for the school and library program -- which amounted to less than a penny a day. I can think of no more worthwhile investment for our children.

Now, I am pleased to say that grass roots groups and student organizations have fought diligently for this effort. As a result, we were able to save the E-rate, but attacks on it continue. If the E-rate is taken away or reduced any further, as a recent report by the National School Boards Association clearly demonstrates, students in schools and people in libraries across the country will be left high and dry. That is wrong and people need to speak out about it.

Let me tell you in no uncertain terms -- President Clinton, Vice President Gore, and I will continue to fight any efforts to dismantle the e-rate and widen the digital divide.

What good is it to be the richest nation in the world -- with the greatest technological resources in the world -- if the ability to benefit from technology is dependent on whether a student goes to a particular school?

There are many who criticize the use of technology in our schools. The irony is that those who belittle this use of technology are those who already have access to computers and the preparation to participate fully in today's Information Age.

This debate has never been about technology. It has been about what our children have the opportunity to do. It's about much more than just giving a young person a computer or connecting that person to the Internet. It's about connecting students to a whole new world of learning resources and offering the mind the opportunity to expand and take on a new and challenging future.

As I'm sure many of you already know, the web is a wondrous resource for those of you thinking about college. A recent survey of college-bound high school seniors found that 78% had used college web sites during their hunt for campus information -- up from 4% just two years earlier.

The Department of Education's own web site provides publications such as *Getting Ready for College Early*, the *Student Guide to Financial Aid* and *Funding your Education*. You can even get and fill out your financial aid forms for college (FAFSA) via the web.

I am delighted to announce that today we are unveiling our "Think College Early" web site. This new site will provide middle school students, parents, and teachers critical information they need to know to begin to get prepared for college. If parents are not computer literate, I would encourage students to download a copy of the Department's own *Parents Guide to the Internet* -- so that parents and children can discuss and research these issues together.

We also need to improve opportunities for teachers to use technology -- so that it is just as easy as it is for most teachers to use a chalkboard today. The best high tech learning equipment is of little value if a teacher doesn't know how to use it effectively in the classroom. Colleges of education need to incorporate technology resources and training into their curriculum. Some already use this, most do not, and all of them should.

This Administration has proposed a number of initiatives designed to strengthen teacher training, with an emphasis on application of technology in the classroom. One such effort would provide $75 million to help ensure that all new teachers entering the workforce can integrate technology effectively in the curriculum.

This is particularly important, given the expected need over the next 10 years for more than two million new teachers. And I hope when the full House of Representatives takes up this issue, it will reverse the decision of the House Appropriations Committee, which refused to fund this important initiative.

Now before I close, I want to emphasize another very important point. While we know that technology makes a very real difference in helping teaching and learning, it is not -- I repeat -- it is not a panacea for fixing all of the challenges that our schools face. It is a not a substitute for solid teaching and learning, but an opportunity to enhance and build upon it.

The benefits of technology in schools can only be achieved by entire communities coming together. And this Administration is fighting to make the investment to improve education and our schools. We want to give every community more resources -- through efforts to raise standards, lower class size, strengthen teaching, improve reading, build and modernize schools, and expand after-school programs. And technology is an important part of this.

The majority in Congress has so far been only negative and opposed full investment in these initiatives. But I hope with the new school year they will get the education spirit.

Quite simply, we need to work together -- in our local communities and with national leadership and assistance -- to make sure that all schools have the hardware, software, wiring, and teacher training they need and every child has the opportunity to click into the educational promise of technology.

We have it in our power to make sure that this tool for learning not only does not exacerbate the divide between rich and poor -- but also works to close it.

Most parents and educators understand the value of technology even if they don't understand the technology itself. It is a reflection of Americans' overall deep feeling about the promise and the power of education -- its enormous capacity to open doors, create opportunities and help make people better citizens. Americans understand that without education, we can have neither excellence nor equity. I hope Congress will hear the voices of America.

As President Clinton said recently, "We can extend opportunity to all

Americans -- or leave many behind. We can erase lines of inequity -- or etch them indelibly. We can accelerate the most powerful engine of growth and prosperity the world has ever know -- or allow that engine to stall."

I say it is time we take on the challenge and commit ourselves to ending the digital divide. I challenge this nation to work to ensure that every young person in America has the opportunity to sign on to the Internet, to conduct research, look for information about colleges, and just express a natural curiosity and strengthen a love for learning.

What we can not do is let this opportunity pass us by. We must fulfill the promise of this new age of education and information.

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