PUTTING TECHNOLOGY TO WORK IN AMERICAN CLASSROOMS
EDUCATION TECHNOLOGY RESEARCH AND EDUCATION TECHNOLOGY INITIATIVES

The President's FY 2001 budget provides a $1.02 billion investment in education technology and education technology research, a $187 million increase over last years appropriations. This technology will give local school systems, colleges and universities, and businesses powerful, affordable new tools for delivering high quality instruction.

President's FY2001 Programs	FY 2000 ($M)	FY2001 ($M)	Percent Change
Interagency Education Research Initiative	38	50	+32%
Next Generation Technology Initiative • Advanced Technology Applications for Education • Challenging Coursework Online	197	170	-14%
Digital Library of Education	15	41	+173%
Technology Literacy Challenge Fund	425	450	+6%
Community-based Technology Centers	32.5	100	+208%
Preparing Tomorrow's Teacher's to Use Technology	75	150	+100%
Ready to Learn Digital Television	16	16	0%
Telecommunications Program for Professional Development	8.5	5	-41%
Making Education Technology Accessible	0	5	--
Learning Anytime Anywhere Partnerships	23.3	30	29%
TOTAL	830	1,017	23%

The E-rate, Technology Literacy Challenge Fund and other federal investments made over the past seven years have resulted in a dramatic increase in the number of classrooms equipped with modern computers and connected to the Internet. Over the next decade, computers, the Internet, and other new information technologies will play an even more critical role in addressing the education and training challenges facing the Nation. Indeed, it will be difficult to meet the exploding demands for well-trained American workers without the effective use of these new tools. Given careful assessment, information technology has the potential to enrich learning from pre-school through college education and can help people now working to upgrade their skills when and where they need to – at home or at work. In order to ready our communities and our schools to make use of this great potential, the President's FY2001 budget increases the Department of Education's education technology programs by $137.2 million, an 18 percent increase over last year's budget. This includes increases of 300 percent for Community-based Technology Centers and 100 percent for Preparing Tomorrow's Teachers to Use Technology.

New investments provided in the President's FY2001 budget would ensure that information technology equipment--in schools, homes, work places and community centers--is put to its fullest use with software to help teachers and local school systems combine the skills of classroom teachers, challenging simulation-based software, access to instructors, specialists and consultants worldwide, and access to a world-wide web of text, images, and other materials. The FY2001 includes the following new investments in education technology research and education technology to accelerate markets for innovative instructional technology.

Interagency Education Research: The FY2001 budget provides $50 million to builds on the success of the Interagency Education Research Initiative (IERI) launched last year. This unprecedented partnership of the DoEd, NSF, and NICHD is supporting large-scale, interdisciplinary studies, on methods for improving preK-12 mathematics and science teaching and learning. This investment will deepen our understanding of how different types of students learn, how new knowledge about the human brain can help improve learning, how best to incorporate new technology, and many other topics. Strategies for improving instruction will be tested at a scale that can provide statistically significant results and ensure that research results are communicated effectively to local school districts.

Advanced Technology Applications for Education. The National Academy of Sciences, the President's Council of Advisors on Science and Technology, and many other groups have concluded that investment

in educational research–particularly research aimed at ensuring effective use of new technology–is inadequate. This $32 million program would support research and development initiatives that advance state-of-the-art educational technology applications. The goal of the program is to advance our fundamental understanding of how technology can be used to improve teaching and learning as well as to produce hardware and software prototypes. Awardees will conduct research and development that combine subject matter expertise, insights from the learning sciences - e.g., cognitive science, neuroscience, educational psychology - and advances in computer and information sciences. Examples of the types of projects supported would include intelligent tutoring systems, simulation-based instruction, and speech recognition.

Challenging Coursework Online: The FY2001 budget includes $10 million for a Challenging Coursework Online initiative. This program will fund competitive grants for the development of high quality, web-based Advanced Placement, second language, and possibly other courses of interest to a large number of schools.   Many schools in rural areas and inner cities want to offer AP courses, but are not able to do so because they can not afford the investment in staff and materials when only a comparatively small number of students want the course. Many schools want to provide second-language instruction (including English as a second language) but software producers find it unprofitable to invest significant funds in developing materials since it is difficult and expensive to reach this diverse and fragmented market. This initiative will address both kinds of problems by funding applied research projects that will allow software developers to form partnerships with experienced educators, local schools and state departments of education. Grants of up to three years will allow these partnerships to develop innovative instructional uses of the new technologies including such things as online simulations.

Digital Library of Education: This $41 million initiative implements the President's December 17, 1999 Memorandum*, The Use of Information Technology to Improve Our Society*, directing the Smithsonian, National Park Service (NPS), National Science Foundation (NSF), and Institute of Museum and Library Services (IMLS) to work with the private sector and cultural and education institutions across the country to create a Digital Library of Education to house this country's cultural and education resources. The program has two components:

- **Digitization of America's Treasures:** Funding requested for the Smithsonian Institution ($3 million) and the National Park Service ($1 million) will allow these institutions to digitize, index, and make available on the Internet not only pictures and documents, but music, oral history, 3-dimensional objects, and virtual tours of cultural sites like historic buildings or battlefields. These institutions are custodians of such things as the Apollo 11 command module, the Gettysburg battlefield, Ansel Adams photographs of Yosemite, the compass Lewis and Clark used to explore the American West, and Thomas Edison's laboratory notes, and literally millions of other objects which could enrich the education of children in all parts of the nation. The initiative also will provide $10 million for the IMLS to support digitization of texts that are now in the public domain, special collections (primarily historical materials), paintings, and sculptures. It also will help develop tools for information discovery and retrieval to make it easier for students, parents and teachers to locate the material.

- **Digital Library for Math and Science:** The President FY2001 budget includes $ 27 million to fund NSF's Digital Library for Math and Science is designed to increase the quality, quantity, and accessibility of internet-based K-16 educational resources. This investment will make it much easier for students, teachers, and parents to locate and use standards-based educational materials and learning tools. Research supported under this initiative will help ensure that these materials are easy to incorporate into local curricula.

Making Educational Technology Accessible: The FY 2001 budget includes $5 million in the National Institute on Disability and Rehabilitation Research (NIDRR) for a new initiative to provide technical

assistance and training to elementary and secondary schools on accessible information technology, statutory requirements and technology standards, and resources available to elementary and secondary schools serving students with disabilities. Access to appropriate technology will play a major role in helping State and local educational agencies provide a free appropriate public education to students with disabilities provided in the least restrictive environment, as required by the Individuals with Disabilities Education Act (IDEA).

Learning Anytime Anywhere Partnerships (LAAP): The FY 2001 budget provides $30 million for the LAAP program, which provides competitive grants to partnerships to ensure that high-quality learning opportunities are available to distance education students. It is the Department of Education's only initiative to influence the transformations that are occurring in post-secondary education as a consequence of the explosive growth of distance learning. LAAP supports distance education delivered in asynchronous instructional formats that utilize the Internet or CD-ROM. The partnerships develop and assess model distance education programs and educational software and find innovative measures of student achievement that are appropriate for distance education. Eligible partnerships comprise two or more independent organizations, which may include colleges, community-based organizations, school districts, and businesses.